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Mississippi Agricultural and Mechanical College reports

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Report of the Trustees, President and other Officers of the Agricultural and Mechanical College of Mississippi, from the organization of college to Dec. 1st, 1883

Biennial report of the Trustees, President and other Officers of the Agricultural and Mechanical College of Mississippi, 1884-'85-1890 and 1891

Biennial report of the Trustees, President and other Officers of the Mississippi Agricultural & Mechanical College, 1892 and 1893-<1894-1896>

LLMC 01-490t

BIENNIAL REPORT

OF THE

Trustees, President and Other Officers

OF THE

AGRICULTURAL AND MECHANICAL

COLLEGE OF MISSISSIPPI,

FOR THE

YEARS 1888 AND 1889.

PUBLISHED FOR THE INFORMATION OF THE LEGISLATURE AND THE PUBLIC.

JACKSON, MISS.:
R. H. HENRY, STATE PRINTER.
1890.

REPORT OF EXECUTIVE COMMITTEE.

Hon. Robert Lowry, Governor and ex-Officio President of the Board of Trustees of the Agricultural and Mechanical College:

We herewith transmit the report of the operations of the Agricultural College for the years 1888 and '89. Considering the disadvantages under which the institution has been conducted, and the destruction of much valuable property by fire, we think the showing a remarkably good one. For want of funds to pay salaries offered elsewhere, we have lost some experienced members of the Faculty. We trust there will be such provisions for the future support of the College as will leave no room for doubting the purpose of the Legislature to keep it in the position it now holds, as one of the very best institutions of the kind in the United States.

H. M. Street,
W. B. Montgomery,
Executive Committee.

PRESIDENT'S REPORT TO BOARD OF TRUSTEES.

AGRICULTURAL COLLEGE, MISS.,
November 25, 1889.

To the Honorable Board of Trustees of the Agricultural and Mechanical College of Mississippi:

GENTLEMEN: It is my duty under paragraph 4, Section 5 of the Act of Congress providing Colleges "for the benefit of agriculture and the mechanical arts," and also of the Act of the Legislature of Mississippi, approved March 3d, 1884, to make stated reports for the information of the Legislature and for file with the Interior Department at Washington, and with the different colleges instituted under the Federal law. This report is intended to cover the sessions of 1888 and 1889, ending with the ninth session of the College.

ORIGIN OF THE COLLEGE.

The College owes its origin to the bounty of the Congress of the United States in donating public lands or land scrip to the several States, "which may take and claim the benefit of this Act," providing for industrial education. Mississippi netted into her treasury from the sale of her part of this donation $227,500. The acceptance of this partial endowment imposed on the State an obligation or contract, "to establish and maintain at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." The law specifies that only the interest on the fund donated can be used; that the State must provide all buildings, do all repairing, and give such additional support as may be necessary. The original fund must not be spent, and if these conditions are not complied with, the fund must be returned to the United States. This Act of Congress showing these conditions is published with this report. When the scrip was sold and the money placed in the treasury of the State, bonds bearing 5 per cent. interest were issued. This is less interest than is paid the Chickasaw School Fund, the University Endowment Fund, or any other fund for educational purposes.

PRESENT STATUS OF THE LAND SCRIP FUND.

The present status of this fund is as follows: The $227,500 was divided equally between this College and the Alcorn University, each receiving $113,750, and only being authorized to use the annual accrued interest. The United States law permitted 10 per cent. of the endowment fund to be expended for land for the college farm. Under this clause $15,000 was spent for the purchase of the farm attached to the College, reducing its part of the fund to $98,575, yielding an annual interest of $4,928. This is all the support received from the landscrip fund, and this can only be used in a certain way.

STATE LAW ESTABLISHING COLLEGE.

The State law establishing the College (and attached to this report) in Sec. 9 provides for "the establishment and maintenance of a first-class institution, at which the youth of the State of Mississippi may acquire a common school education, and a practical and scientific knowledge of agriculture, horticulture and the mechanical arts; also of the proper growth and care of stock, without, however, excluding other scientific and classical studies, including military tactics." The College is, therefore, a part of the common school system, with the addition of instruction in agriculture, etc., for which Congress provided specially in the establishment of this and similar institutions.

LEGISLATIVE SUPPORT.

The successive Legislatures, from its organization, have given the College liberal support, and maintained it as a "first-class institution," until the session of the Legislature which met in 1888, which reduced the appropriation $7,440 a year, or $14,880 for the two years below the support given for the years 1886 and 1887. The appropriation bill, by fixing the salaries of all employees, from the President to the lowest officer and designating the amount for each, and placing these amounts *one-fourth less* than paid similar members of the Faculty of other first-class institutions in and out of the State, virtually tied the hands of the Boards of Trustees, and deprived them of the powers given to manage the details of the institution in the Act incorporating the College. This institution, established under a contract with the United States, and for the benefit of agriculture and the mechanic arts, and in the interest of industrial education, was alone subjected to "heroic treatment," and an experiment of economy in College management. The friends of the institution feel confident that in the present Legislature there will be no disposition to discriminate unfairly.

PREVIOUS ATTENDANCE AND RECORD.

The record of the College to January, 1888, showed an annual average attendance of 311 students, and in the two sessions just preceding an average of 349 students a session. It is the policy of the Trustees and Faculty to extend the benefits of the College to the greatest possible number, and it seems but just that the large attendance should be considered in regulating the appropriation.

ACTION OF THE TRUSTEES.

In this hour of trouble, the Board of Trustees were true to their charge, feeling that the matter was not fully understood. They determined to stand by the College, and if possible tide it over the two years strain that would inevitably come upon it. The following resolution explains their feeling and action:

"Recognizing more or less despondency upon the part of the friends of the Agricultural and Mechanical College, by reason of diminished appropriation, and an embarrassing apportionment bill, therefore be it

"*Resolved*, That as a Board, we will stand by the College, and give our best efforts to so accommodate the management to the recent legislation as will work the least possible detriment to the cause of industrial education; and having full confidence in the President and members of the Faculty, under whom its present success has been attained, we ask their continued united aid and co-operation."

THE RESULTS OF REDUCED APPROPRIATION.

The previous success of the College was conceded, and the large attendance had attracted universal attention, and so soon as the action of the Legislature was known the authorities of similar institutions in other States at once began holding out inducements to the Faculty to leave the institution, offering large increase of salary. As result: four (4) professors, two assistant professors and six tutors left for better paying positions. We were also so unfortunate as to lose one professor by resignation, and another by expiration of detail (United States officer), making a change in the Faculty and assistants of fourteen (14), in little over one year. In one chair, (Agriculture), there were three professors during that period, involving a change of management, incident to the personality of the three gentlemen, doing away with responsibility as to results, and destroying the accuracy of experiments, for they were also employed by the Experiment Station. Tempting offers for changes to other States were also made to other members of the old Faculty, but they elected to stand by the institution, believing a more liberal policy would be adopted for the future.

The reduced appropriations put it out of the power of the Trustees to fill the vacancies with experienced professors, and they had to employ young graduates of the College (mostly), in the places of the trained men who had contributed so much to making the institution a success. It was found, however, that even these young graduates could not be retained at the reduced salaries. One was taken at a salary of $2,000, by a railroad company, and put in charge of a model farm in Georgia; another to a better paying position in a permanent business.

These sudden and rapid changes amounted almost to a reorganization of the College. The two sessions have been a period of great strain, retarding and setting back the progress and usefulness of the institution. To have come out with a full College attendance, is proof of its real worth, its thorough organization, and the unselfish labor of its Trustees and Faculty. It has demonstrated fully, by actual test, that a man or commodity is worth what he or it will bring on the market. Mississippi cannot keep first-class institutions unless she pays the same price for Professors as other States do for the same grade of talent. The most important and necessary part of any College, is a learned, earnest and competent Faculty.

ATTENDANCE, SESSIONS 1888 AND 1889.

During the session of 1888, there was an enrollment of 286 students (178 in the College classes and 108 in the preparatory department).

In the session of 1889, an enrollment of 318 students (182 in the College classes and 136 in the preparatory class).

In this, the beginning of session of 1890, we have already an enrollment of 293 students, larger than usual, so early in the session. This continued large attendance would show that the College is near the hearts of the people, and that they appreciate the efforts of the Board of Trustees in their management.

MONEY SPENT FOR EDUCATION IN MISSISSIPPI.

The opponents of the University and Colleges claim that the State is proportionately more liberal to her Colleges than to the common schools. The record at the State Department of Education shows that for the year 1888–'89 the State spent for her common schools, in round numbers, $1,115,000. This includes State distribution, county levy, city levy, polls and every source. For Colleges $92,000, or 8 per cent. of what is paid for common school support. This is not out of proportion, when we consider that it is an incontrovertible fact, sustained by experience and statistics, "that schools in which the elementary studies are to be taught, can exist and accomplish their work successfully only when Colleges and Universities exist as educational standards, and as sources of stimulating, shaping and elevating influences in all the lower grades of educational work."

DIFFERENT DEPARTMENTS.

For details of the work in the academic and industrial departments, I refer to the reports of the heads of these divisions, and will only briefly allude to such matters as I deem important.

DEPARTMENT OF BIOLOGY.

This chair has lost its distinguished head, Dr. D. L. Phares, who from feeble health was relieved from active duty at the beginning of the session of 1888, and who resigned in June, 1889. He was with the College from its organization, and was its able advocate and friend before the passage of the act establishing it. Mr. G. C. Creelman, a graduate of the Ontario Agricultural College, is now the Acting Professor, and is filling the chair with zeal and ability. This department needs about $1,000 to complete a laboratory for practical work and illustration.

DEPARTMENT OF ENGLISH.

The work in this department under Professor W. H. Magruder is most thorough, and nothing I can say will add to the reputation of this distinguished educator. He has shown his loyalty to Mississippi and the College in declining two tempting offers at advanced salaries in other States since our last report.

DEPARTMENT OF MATHEMATICS.

This chair for the last three sessions has been filled by Lieut. H. C. Davis, U. S. Army, (Commandant of Students), as acting professor. The instruction has been most thorough. The chair is now filled by one of our own graduates, Prof. B. M. Walker, who graduated in 1883. He assumed the duties at the beginning of the tenth session, now in progress. Civil engineering and mechanics are now taught in this department, and about one thousand dollars' worth of apparatus is needed for illustration, as is fully itemized and explained in the report of the professor. This want was fully also set forth in the report before the last Legislature.

CHEMICAL DEPARTMENT.

The Professor (Myers) resigned in June, 1888, and his chair was filled by the election of Prof. W. L. Hutchinson, of the Experiment Station staff of Louisiana. This gentleman ably fills the chair, and is giving general satisfaction.

This department needs an addition of apparatus to illustrate the teaching of physics more thoroughly. It will require five hundred dollars to purchase this apparatus. The Professor of Chemistry is also State Chemist. The law is defective, as it requires no reports. The Professor, however, makes a report with his college report. I call attention to his suggestions as to changes in the fertilizer law, so as to protect the farmers of the State more thoroughly in their purchase of fertilizers.

PREPATORY DEPARTMENT.

This department is most ably presided over by Prof. Dabney Lipscomb, and he has had under his instruction about one-third of the students in the principles of a common school education, as provided in the law. It is almost impossible to keep experienced teachers in this division, as they are taken by the common schools of the State, which pay higher salaries than the College can afford to pay. I recommend an increase of salary to the teachers so that their services can be more readily retained, and remove a constant source of resignation. There can be no efficient teaching unless there is a permanent teaching force. I refer you to the report for explanation.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS.

Lieut. H. C. Davis, U. S. A., was relieved in June, 1889, by First Lieut. J. V. White, U. S. A., who assumed charge of this chair. In this department is taught so much of Military Science and Tactics as is thought necessary, including battalion and company drill, and artillery drill. This Professor is also Commandant of Students, and is directly chargeable with the discipline of students, under the supervision of the President. The discipline has been good during the last two years. The students do not average more than one drill during each week in the session, but military discipline pervades every department of the College, in the class-room, in the dormitory and at meals. The Commandant recommends that the rooms be fitted with iron bedsteads for use of students and at expense of State. I approve the recommendation.

THE AGRICULTURAL DEPARTMENT.

This department includes the theoretical instruction of students in the Science of Agriculture, and also the application of the underlying sciences. This is done in the classroom. In the field the practical application is made in the raising of crops and stock. I refer for details to the report of Prof. Connell. This department is the one that has suffered most by the frequent changes of professors—having had three since the adjournment of the Legislature; one going to Texas at a salary of $3,000, and another (one of our graduates) to Georgia, at a salary of $2,000. The present occupant of the chair taking charge at the close of the session of 1889. With these sudden changes it has been almost impossible to get accurate reports of the two years' work.

The farm consists of 1800 acres of land, 400 of which is in actual cultivation, the balance being devoted to pasturage, the horticultural grounds and the campus. The farm has near 400 head of stock, and has been self-sustaining since the beginning of 1885, not having received any assistance from the State, paying its foreman and employees, and developing the farm, adding such equipments as was deemed best. This, of course, does not include the student labor, a feature which, while educational, is not remunerative.

A committee of the Board of Trustees inspected the farm June, 1889, and made a most complimentary report of its condition. Since the opening of the present session the department has been unfortunate in having both of its barns (2½ miles apart) destroyed by fire, with nearly all of the forage for 400 head of cattle for winter feeding. The loss in the two buildings is $2,900, in hay and oats and ensilage, $2,300; in improved implements, machinery, etc., $2,500; total $6,733. The condition of the farm was splendid when these accidents occurred. It will be able to overcome the loss in forage, but can not replace the barns or implements and machinery. The farm has $1,000 to its credit to assist in overcoming the emergency. The herd can not be as well cared for as usual. The fires occurred about the time the students were relieving the temporary help employed during the vacation to milk and attend to the College herd. It is impossible, at this time, to trace the cause of these two fires and the burning of the President's house and the Mess Hall

THE HORTICULTURAL DEPARTMENT.

The State law specifies that the College must give "a scientific and practical knowledge of horticulture," as well as agriculture, and this department does this. It teaches horticulture theoretically, and illustrates the practical part in the garden, orchard and vineyards. The Board of Trustees, however, have never had the means to equip this department, and it has had, and still has, a hard struggle, with the disadvantages of a poor start and inadequate outfit. This industry is a growing and most important one in Mississippi, and sufficient capital should be furnished to put it on a proper basis. The State Horticultural Society in 1885, memorialized the Board of Trustees to put it on as favorable a basis as the farm department, and the Board promised to do so, but reduced appropriations have prevented their carrying it out. The department has also had to labor under a recent change of professors, caused by one leaving for a more lucrative and permanent position. It is now in charge of one of our graduates of the class of 1888, B. W. Saffold, who is the acting professor. He took charge May 1, and has not yet had an opportunity to show his skill.

But with all these disadvantages, the department is self-sustaining, and has received no help from the State in five years. The land is not suitable for good results, except under high fertilization, which the department has not had the means to attempt, as the policy of the College is not to go in debt, and to purchase nothing unless the cash is in hand to pay. It will require at least $1,500 to put up the necessary buildings for storage, cellar capacity and equipment.

THE AGRICULTURAL EXPERIMENT STATION.

The act of Congress establishing these Stations was approved March 2, 1887. The Legislature, January 26, 1888, located the Station at this College. The Station is a department of the College, and affords an object lesson to students and citizens of the State. Its work, however, is separate and distinct, having its separate working force, its own teams, buildings, etc. The accounts and expenditures are directed and revised by the Board of Trustees of the College, and passed on by the Treasury Department in Washington. The Station is required to issue Bulletins and to publish an annual report February 1st of each year. The Station has published one such report, and has issued ten Bulletins of its work. These are sent to any farmer in Mississippi who has his name put on the list for that purpose, or sends for them. Although every effort has been made to induce farmers to get them, still there are not as many called for as should be.

Since the last session of the Legislature, owing to reduced appropriations, there have been many changes in the working force of the Station. The professors were employed to do a good deal of this work. The Station has had three agriculturists, two horticulturists, several chemists. This constant changing has brought out the fact that the work of the Stations to be effective and useful to farmers, must confine its work to a few skilled men not connected with the College, and who must give their undivided attention to experimental work. A division of time and interest is detrimental both to the College work and the Station. The professor of the College cannot give that close attention to experimental work which that kind of work requires to make it of value. The spirit of the law intends the experimental work to benefit the farmers. The College and Station can be mutually beneficial to each other, and can use same buildings, etc., but their work must be separate and distinct, with separate working force. All the expenses of the Station are paid for by appropriations of Congress. I refer to the report of the Director, and also to the annual report and Bulletins which can be obtained at the Station.

MEDICAL DEPARTMENT.

We have a surgeon regularly employed and living on the campus who cares for sick students. Each student pays the doctor a fee of $5 a session, which pays for any medical attention or medicine he may need. The health of the student body is splendid. We have had only one death in five years, and this was from an attack of hematuria, or yellow chills, contracted in the Yazoo Delta. I refer to Dr. Barr's report and commend this gentleman for his skill and efficiency.

THE APPORTIONMENT LAW.

This law was passed by the Legislature of 1888, apportioning students to the different counties in the State. The law, owing to its enacting clause, was declared inoperative until the opening of the present session, by the Attorney-General. Although it was attempted to put the law in force for the session of 1888-'89, the superintendents of education generally declined to act in the face of the opinion of the law officer.

Any law that would apportion students equitably would be acceptable to the College, but it is impossible to compel students to attend unless they desire. Really all that is necessary in any law is for the College authorities to be compelled to provide for a certain equitable quota from each county whenever they present themselves, but when they do not come to permit students from other counties to get the benefit of instruction. The College has to provide instruction any way, supposing every county will be represented. The law discriminates against farmer boys who want to attend, in certain instances, as they are required to pay tuition. This is hard, because at the other State College, even students from adjoining States get their tuition free. It is hard for any Mississippi boy to have to pay tuition under such circumstances. We commend a law similar to the one in force before the passage of the present law, excepting it be made binding that every county must be cared for whenever it may send its quota.

ATTENDANCE BY COUNTIES.

It will be noticed that only five of the seventy-four counties in the State have not been represented since my last report two years ago, at the College; and by sessions, we find seventeen not represented in 1888; thirteen not represented in 1889, and thirteen not represented in 1890 so far. This is a good showing for the seventy-four counties and brings out the fact that the attendance is becoming more uniform. One thing is certain, no student from any county in the State has been refused admittance into the College, when the county has not had its full quota, and even over, and every effort has been made through the provisions of the apportionment law, to have every county represented. After opening of session county superintendents have been informed when their counties were unrepresented or had less than its full quota.

THE LIBRARY.

The number of books in the Library is 3,017 volumes. Of these 1,265 are public documents from the Departments in Washington, 486 public documents received from the different States, 550 are scientific books of reference, and only 614 are in the literary department; 101 are classed as miscellaneous. There are 2,350 unbound works, besides magazines, papers, etc.

The standard of the College has been gradually raised, and the lack of books in our library is now our greatest drawback. The books we have, from constant use, are well near worn out. The material of reference on any subject is most meagre. There has been spent for books only about $2,000. I urgently ask for $5,000 to furnish books for over three hundred Mississippi boys, always at the College.

THE MECHANICAL DEPARTMENT.

The caption of the law of Congress specifies that the act is intended to "benefit Agriculture and Mechanical Arts," and in section 4 says, "the leading object shall be * * * to teach such branches of learning as are related to agricultural and the mechanical arts." The State law is equally explicit as to including the "Mechanic Arts." On organizing the College, the Board of Trustees thought best to perfect the agricultural feature first, as 90 per cent. of the people of Mississippi derived their support from farming, and but few were engaged in mechanical pursuits. They did not think the money in sight was sufficient to perfect both features at once. For the last two Legislatures it has been reported that the College was now ready to add the Mechanical Department, and the Board asked for means to put up the shops for wood and iron, and to equip them. But little addition will be needed to the Faculty. The same Faculty could teach what was required. The only change would be to have two parallel and equivalent courses for agriculture and the mechanical arts, adding mainly more mathematics for the latter. It will require about $18,000 to erect the buildings and equip them. Specifications have been obtained of the cost at the Agricultural and Mechanical College of Alabama for this feature of the College, and can be furnished if called for.

VETERINARY SURGEON.

The loss of stock in Mississippi is very great, and mainly because of lack of skill in treating diseases of animals. Nearly all the States of the Union have a State veterinary surgeon, whose duty it is to go to such parts of the State as have epidemics, and to assist farmers with such directions as will give intelligent treatment to sick animals. We frequently have epidemics of charbon and other diseases in Mississippi, and many urgent appeals are made to the Agricultural and Mechanical College for assistance all over the State. The College has not the means to employ a competent veterinary surgeon, and only short lectures during three months are given the students at the College in the Veterinary Art. During the recent epidemic of charbon in Yazoo county, the Agricultural Experiment Station got two experts, one from Washington and the other from Missouri, to visit the infected district, and with good result. But the State or the College should have at its command a competent veterinarian. One cannot be had for less than $2,000, or $2,500. I would recommend that the State make provision for such an officer. A competent man would save the farmers of Mississippi hundreds of thousands of dollars. He could have his headquarters at the College, could give lectures to students, and if necessary the Agricultural Experiment Station and College could pay a part of the salary, if money is appropriated for this purpose to the College.

DRAWING.

Instruction during one year is given to students in free hand and mechanical drawing. In this practical age drawing is becoming an important study, and if the mechanical feature is added more attention and time must be given it. Mr. E. L. Dimitry is in charge of this work, and gives satisfaction. The department is poorly equipped and it would require $500 to fit it up properly.

STUDENTS FROM OTHER STATES.

We have a large number of applications from other States, but have received none since the session of 1885, as the capacity of the College has not been sufficient for Mississippi students who desired to attend.

THE LABOR FEATURE.

This is a most difficult problem at the College, owing to large attendance of students. There is but a given amount to be expended, and labor cannot be furnished except to correspond with the money in hand to pay for it. Nominally, work is compulsory, but is arranged as follows: It is compulsory for a prescribed minimum number of hours, and then it is optional for the rest. In this way the money really goes to the willing and best workers. The demand for labor is greater than the facility of furnishing it. It is most difficult to find labor daily for a large number of boys for a few hours, and students working in large squads do not do good work. The labor is not remunerative, and could be more cheaply done by other labor. But it is most valuable as an educational feature, and in keeping students in sympathy with labor. Our graduates who are holding important positions, and giving most credit to the Institution, are the ones who did most manual labor while at the College. But after all, the education is the first consideration, and the labor is to illustrate practically what is learned in the class-room.

DEPRESSION IN AGRICULTURE.

There is great depression in agriculture in the United States. Those engaged in other pursuits than farming are making so much more money than the farmers that it is difficult to get educated young men to engage in this great industry. In 1860 the farmers were one-half the population and owned one-half the wealth of the United States, and in the decade 1850 to 1860 they increased the value of their farms 101 per cent. In 1880 they were still one-half the population and owned only one-fourth of the wealth of the United States, and in decade 1870 to 1880 only increased their wealth 9 per cent.—a loss of 92 per cent. This, too, when the agricultural population had increased 29 per cent., and the aggregate wealth of the country 170 per cent. Statistics show this disproportion is greater, and the tendency more alarming, in the present decade. They also show that in many of the richest agricultural States that from one-half to two-thirds of the lands of farmers are under mortgage for their full value, and that the land is fast getting out of the hands of the present owners. In decade 1850 to 1860 agriculture led manufacturing 10 per cent. in increased value of products. In decade 1870 to 1880, manufacturing led 37 per cent. in value of products, a difference of 42 per cent in favor of manufacturing. Almost the same disproportion exists when we contrast agriculture with other products. With these glaring facts it is certainly the duty of the State to foster agricultural education in every way. More intelligence and skill, and saving of capital in special education will go far to enable farmers to better their condition and to hold their own in the great industrial revolution now in progress. This is especially so in Mississippi, where 90 per cent. of our population are engaged in farming. This College is established to try and aid the farmers to overcome these great disadvantages.

TEACHING THE ELEMENTS OF AGRICULTURE IN THE COMMON SCHOOLS.

Under the direction of the Board of Trustees a text-book has been prepared and used in the preparatory class of the College for several years, teaching the elements of agricultural science. It is a success, and it is found that boys learning arithmetic, geography and grammar more readily master this text-book than the above-named common school studies. The National Alliance and our State Alliance, made up of farmers, have directed that State Legislatures be memorialized to pass laws to enforce the study of the elementary principles of agriculture in the common schools, and I deem it proper to call the attention of the Legislature to this important matter.

WHAT STUDENTS ATTEND THE COLLEGE.

A careful examination of the roll of students has shown for several sessions that 80 per cent. of all who attend are the sons of men engaged in farming.

STEWARD'S DEPARTMENT.

The average cost of board for students during the sessions of 1888 and 1889 has been $8.65 a month, and this includes policing of dormitory and chapel building, breakage of crockery and glassware, oil used in lamps of students while studying, delicacies for sick students at hospital, etc. The present Steward, Mr. W. J. Galloway, is a conscientious, painstaking officer, and thoroughly understands his business. I refer to his report.

EXPENSES OF STUDENTS.

The necessary expense of a student is about $124.50. This includes board for nine months, $76; coal, $5; uniform, $15.50; medical fee, $5; books and furniture, $17; washing, $6. The student reduces his expenses by what work he does, which is credited on his board. This amount varies from $10 to $50 a student, depending on the individual student. Our experience shows that a careful boy can readily get through a year on from $100 to $150, and this amount puts the opportunities of the College within the reach of young men of limited means, and this class of students are mainly attending the College.

SALARIES PAID FACULTY AND EMPLOYEES.

For the session of 1888-'89, the following salaries were paid out of the appropriation made by the Legislature: President, $2,000; one professor, $2,000; one professor, $1,500; one professor, $1,250; four professors, $1,000 each; one assistant professor, $800; one acting professor, $500; one assistant professor, $600; one assistant, $400; three assistants, $360 each; one steward, $810; one secretary, purchasing agent and treasurer, $1,300.

To prevent a complete disorganization of the College the Board of Trustees arranged for the President and members of the Faculty to perform certain duties in connection with the Experiment Station, and to have their salaries supplemented out of the Station fund. As stated in this report, while discussing the Agricultural Experiment Station, this arrangement not having worked satisfactorily to the College employees or to the Station, will have to be changed, except in one or two cases; but even with this addition to the salaries of the professors, they were so far short of what was paid by other Colleges for College work alone, that the professors and employees were taken to other States at largely increased salaries. The Faculty of the College should be paid by the State, and the Station employees by the Station. This is necessary for efficient work, and justice to the College and to the Station.

FINANCIAL STATEMENT.

The report of the Secretary, Treasurer and Business Manager, gives full details of receipts and expenditures. The last Legislature made no appropriation for repairs on buildings, stationary, postage, insurance, traveling expenses of Trustees, or other incidental expenses. To meet these it was necessary to use the fund previously reserved to purchase coal for students, and purchasing same on a credit, and by cooperation with the Experiment Station whereby certain expenses could be assumed by that department. This arrangement was absolutely necessary to keep the institution up, and care for the public property belonging to the State.

The other departments of the College—the farm, horticultural and chemical—received no assistance from the State, and have been self-sustaining. The policy has been for these departments to expend what they make in improving, equiping, additions, etc. They have received no assistance from the State for five years or more.

This College can not be maintained on the support given it the last two years. It must inevitably go down with like treatment. The expense of conducting its academic department is as great as any other College or University of like grade and attendance. The industrial departments are for illustration and instruction, and now that they have been exempt, they ask nothing for their support from the State. They are no expense to the State. All that is asked is a support in salaries, student labor and the incidental expenses which are common to every College or University. In asking this we present a College, which for the ten years of its existence, has had an average attendance annually of 313 Mississippi boys, and many of whose graduates are holding important positions in life, and whose attendance are giving evidence of good work all over our State.

I cannot conclude the financial part of this report without complimenting the Secretary and Business Agent, Mr. T. F. Watson. To his skill is due in a great measure our being able to accommodate ourselves to the reduced appropriations. He has also remained loyally at his post, in the face of a tempting offer to go to another State.

SUPPORT FOR 1890 AND 1891.

It will require for the support of the institution:

For the year 1890	$ 33,250 00
For support for 1891	29,550 00
For two years	$ 62,800 00
Average support each year	$ 31,400 00

The difference in the two years is caused by leaving out the amount asked for for repairs and insurance in the second year, and included in the first. These amounts are necessary for the support of the institution and does not include the pressing wants indicated below:

To replace the President's house destroyed by fire	$3,000 00
To purchase books for College Library, (only $2,000 having been expended for this purpose since opening of College)	5,000 00
The Board recommend a new chair of Veterinary Science	2,000 00

FOUR DESTRUCTIVE FIRES AT THE COLLEGE IN LESS THAN TWO MONTHS AT THE OPENING OF THE PRESENT (10TH) SESSION.

The College, after going through two years of the severest strain, it could be subjected to, has, at the beginning of the session, now in progress, had four destructive fires. The two-story College barn was burned the week of the opening (September 22). The President's house October 15. The lower College barn (2½ miles off) October 23, and the Mess Hall for students November 16. In the nine previous years the College has not had a single fire involving any loss. This alone would indicate that the burning was incendiary and the culmination of an effort to destroy the institution. The authorities have left no stone unturned to discover the burners. Three colored boys, one 17, and the other two 15 years of age, have been committed by the civil authorities to await the action of the grand jury for burning the first barn.

The losses by those fires amounted to $10,000. There was $2,500 insurance on the mess hall and $500 on range and fixtures. The insurance will replace the lower story of the mess hall and the range, and this is now being done. The two society halls which made the 2d story of the old building can not be replaced. The two societies are most valuable adjuncts to the College, and the loss of their halls is a great blow to the student body, as they had spent considerable money in their decoration. It is also a great loss to the College, which derived great benefit from this voluntary and enthusiastic work of the students.

APPRAISEMENT OF COLLEGE PROPERTY.

The appraisement of the College property by three disinterested citizens, Messrs. J. H. Beeman, of Scott, G. W. Dyer, of Panola, and J. W. Howard, of Monroe county, is placed at $188,617.12, less by $18,369.23 than the appraisement two years ago; about $16,000 of this is accounted for by the fires, as there was a loss of $5,920 in produce, machinery, implements and property. The rest of the loss is explained by depreciation in value of cattle, by lower valuation placed on some buildings, and by apparatus, gas machinery, and property becoming valueless by being worn out and not replaced.

THANKS TO FACULTY AND EMPLOYEES.

I desire to give my hearty thanks for the able and conscientious support I have so cheerfully received from the Faculty and employees of the College. Without this and their efficient work, the institution could not have gotten through the last two years as well as it has. The Faculty has labored under the most depressing surroundings, feeling that their efforts had not been appreciated, even in the face of the success attained by the institution. I cannot give too much praise under these circumstances.

THANKS TO STUDENTS.

The students have at all times seconded and assisted the President, and be it said to their credit, have shown great loyalty to the College and unbounded faith that their College would weather the storm and trial through which it was passing. Their bearing has cheered the President, for he felt any effort was worthy of such spirit and such students.

Respectfully submitted,

S. D. LEE,
President.

ATTENDANCE BY COUNTIES.

COUNTIES.	1887–'88	1888–'89	1889–'90	COUNTIES.	1887–'88	1888–'89	1889–'90
Adams	5	9	6	Madison	9	1	6
Alcorn	3	2	1	Marion	0	0	0
Amite	1	2	5	Marshall	5	3	3
Attala	4	5	8	Montgomery	2	1	0
Benton	1	1	1	Monroe	14	10	2
Bolivar	4	7	3	Newton	2	4	1
Calhoun	1	7	2	Neshoba	3	1	4
Carroll	7	6	7	Noxubee	10	10	8
Chickasaw	3	3	4	Oktibbeha	39	61	55
Choctaw	6	1	0	Panola	8	6	2
Claiborne	2	4	2	Perry	1	1	2
Clarke	6	6	6	Pike	2	10	5
Clay	3	2	5	Pontotoc	4	1	0
Coahoma	4	0	0	Prentiss	2	1	1
Copiah	8	7	4	Quitman	0	0	1
Covington	0	0	7	Rankin	2	5	3
DeSoto	3	3	2	Scott	0	0	7
Franklin	0	0	0	Sharkey	0	5	3
Greene	0	0	0	Simpson	0	2	1
Grenada	6	2	1	Smith	2	2	0
Hancock	1	2	2	Sunflower	0	1	3
Harrison	3	0	1	Tallahatchie	3	1	4
Hinds	6	6	8	Tate	2	2	10
Holmes	13	17	18	Tippah	0	0	0
Issaquena	1	1	1	Tishomingo	0	0	0
Itawamba	3	2	0	Tunica	0	0	1
Jackson	3	4	3	Union	0	0	1
Jasper	0	3	2	Warren	7	2	3
Jefferson	2	5	1	Washington	2	3	2
Jones	0	5	6	Wayne	2	1	1
Kemper	0	7	4	Wilkinson	3	7	13
Lafayette	5	5	3	Webster	2	2	2
Lauderdale	9	9	6	Winston	1	3	0
Lawrence	0	1	0	Yalobusha	1	4	4
Leake	0	0	6	Yazoo	4	7	6
Lee	5	5	1	State of La.	3	0	1
Leflore	2	2	1	State of Ala.	0	1	1
Lincoln	1	0	0	State of Texas	0	0	1
Lowndes	18	15	15				

STUDENTS ENGAGED IN VARIOUS OCCUPATIONS.

Table Showing the Number of the Graduates of the Agricultural and Mechanical College of Mississippi Engaged in the Various Occupations :

Farmers	13
Farming, with other occupations	7
Horticulturists	6
Engaged in agricultural experiment stations	3
In charge of creameries	3
Teachers	14
Lawyers	11
Book-keepers	6
Merchants	4
Engineers	4
Physicians	4
Clerks	2
Ministers	1
Medical students	7
Deceased	3
Occupations unknown	1
Male graduates	89
Female graduates	2
Total	91

The above shows that of the 86 male graduates living, 32, or 37 9-43 per cent., are engaged in farming and kindred pursuits.

Compiled at the request of the President by J. C. Herbert, Class of '87.

Table Showing the Per Cent. of the Graduates of the Agricultural and Mechanical College of Mississippi Engaged in the different Occupations:

OCCUPATION.	Per cent. of Students who attended 1 year.	Per cent. of Students who attended 2 years.	Per cent. of Students who attended 3 years.	Per cent. of Students who attended 4 years.	Per cent. of Farmers with other occupations—1 y'r.	Per cent. of Farmers with other occupations—2 y'rs.	Per cent. of Farmers with other occupations—3 y'rs.	Per cent. of Farmers with other occupations—4 y'rs.
Farmers	42	43	31	39	5	12	7	5
Ministers	1	0	5	0	....	....	....	....
Merchants	17	24	20	5	....	....	....	....
Students	14	15	20	10	....	....	....	....
Physicians	4	2	8	10	....	....	....	....
Lawyers	2	0	1	7	....	....	....	....
Railroading	5	5	1	1	....	....	....	....
Mechanics	2	0	0	0	....	....	....	....
Editors	1	1	0	0	....	....	....	....
Teachers	5	0	12	15	....	....	....	....
Idle	1	0	0	0	....	....	....	....
Office holders	½	1	1	0	....	....	....	....
Engineers	½	1	1	1	....	....	....	....
Other occupations	5	8	0	12	....	....	....	....
	100	100	100	100	....	....	....	....

Compiled, at the request of the President, by J. G. Herbert, Class of '87.

REPORT OF SECRETARY.

AGRICULTURAL COLLEGE, MISS.,
November 28, 1889.

President S. D. Lee:

SIR:—Herewith is submitted my report as Secretary of the College, embracing statement showing all receipts and disbursements from November 28, 1887, to November 28, 1889, under the head of General Statement, and also separate statements of Farm and Horticultural Departments. The Legislative appropriation has been expended for salaries and students labor, equipment and incidental expenses, insurance on buildings, etc. The buildings are greatly in need of repairs, and it will be necessary for their protection to have it done as soon as possible. The insurance will also have to be renewed in March, 1891, and amount of insurance should be increased.

Under the head of incidentals is embraced coal and chalk for section rooms, traveling expenses of Trustees, commencement expenses, pay of ministers for conducting religious exercises, etc.

The Industrial Departments, (Farm and Horticultural), have been self-sustaining for the past two years.

Receipts from Farm Department have been.....	$13,032 74
Expenditures..................................	11,999 08
Receipts from Horticultural Department........	2,441 26
Expenditures..................................	2,377 22

There is a credit of about $100 to Farm Department, and had it not been for the destructive fires we would have a nice revenue from it. With the accounts will be found itemized statements with vouchers attached, all of which have been examined and approved by the Finance Committee. We still have with State Treasurer $2,321.48, which will pay expenses to January 1, 1890.

Attached to statement will also be found inventory of property as appraised by the committee appointed for that purpose, viz.: Messrs. G. W. Dyer, J. H. Beeman and J. W. Howard. The difference is accounted for by the loss by fires, the depreciation in value of cattle, and some depreciation in machinery, apparatus, etc. The inventory shows a total valuation of $188,617.12.

SUMMARY.

Since November 28, 1887, we have received

From State Treasurer from appropriations....	$ 40,260 82
" " " " interest on land scrip..................................	9,857 50
Total....	$ 50,118 32

This amount has been expended for salaries, student labor, insurance, equipment and incidentals.

From matriculation and tuition fees and sale of coal..................................	$ 2,695 00
Expended for printing, postage, stationery and incidentals.	
From fees for chemical analysis....	
From students for chemical and glassware....	2,438 98
Expended for apparatus and chemicals for analysis and for students.	
From Farm Department (see statement)......	13,032 74
Expended for expenses further equipment and development.	
From Horticultural Department (see statement)................................	2,441 26
Expended for expenses, further equipment and development.	
Total income.....	$ 20,607 98

All of which is respectfully submitted.

T. F. WATSON,
Secretary.

GENERAL STATEMENT

Of Receipts and Disbursements A. & M. College, from November 28, 1887, to November 28, 1889.

RECEIPTS.

From State Treasurer:		
" Appropriation.............	$ 40,260 82	
" Interest on land scrip..... .	9,857 50	
		$ 50,118 32
Amount transferred from Experiment Station fund to pay station work..................	$ 2,748 04	
		$2,748 04

From matriculation and tuition fees	1,780 00	
“ Subscriptions from citizens..	15 00	
“ Sale of coal................	900 00	
		$2,695 00
“ Fees for chemical analysis..	$ 1,685 00	
“ Fees from students for chemicals and glassware.......	753 98	
		$2,438 98
“ Farm produce:		
“ Beef cattle..................	$ 5,037 13	
“ Pure bred cattle...........	1,693 25	
“ Milk.......................	2,389 64	
“ Butter.....................	2,049 86	
“ Field crops................	1,732 86	
“ Mules.....................	130 00	
		$13,032 74
“ Horticultural produce:		
“ Vegetables................	$ 970 12	
“ Trees.....................	64 48	
“ Plants....................	126 18	
“ Fruits and berries..........	1,190 48	
“ Mule......................	90 00	
		$2,441 26
Balance cash on hand Nov. 28, 1889		45 32
		$73,519 66

DISBURSEMENTS.

For salaries....................	$ 38,853 44	
		$38,853 44
“ Student labor..............	9,787 32	
		$9,787 32
“ Building and equipment......	1,622 22	
“ Repairs on building..........	746 84	
“ Incidentals..................	2,047 95	
“ Printing, postage and stationery	1,392 53	
“ Insurance...................	1,096 35	
“ Books, papers, and periodicals	302 46	
		$7,208 35
“ Apparatus and chemicals......	1,665 49	
“ Chemists fees..............	142 50	
		$1,807 99

Farm Expenses, Equipment and Development:

For Labor	5,170 88	
" Beef cattle	1,715 58	
" Pure bred cattle	91 36	
" Machinery and implements	1,542 41	
" Feed	1,585 70	
" Buildings	321 98	
" Fertilizers	212 90	
" Fencing	74 85	
" Seeds	420 88	
" Repairs	189 09	
" Printing, postage and stationery	113 45	
" Mules	560 00	
		$11,999 08

Horticultural Expenses, Equipment and Development:

For Labor	$ 1,079 20	
" Implements	323 27	
" Box material	323 93	
" Fertilizers	196 40	
" Mule	150 00	
" Seeds	130 09	
" Feed	80 00	
" Printing, postage and stationery	56 45	
" Permanent improvements	33 88	
" Nursery stock	4 00	
		$2,377 22
Balance of cash on hand		1,486 26
		$73,519 66

INVENTORY OF COLLEGE PROPERTY APPRAISED THURSDAY AND FRIDAY, NOVEMBER 28TH AND 29TH, 1889.

College Buildings	$ 96,050 00
" land	48,912 50
" miscellaneous	5,080 35
" hospital	567 00
" library	2,500 00
" museum	3,161 14
" stewards	1,199 43
" chemicals	3,218 65

Farm buildings	4,750 00
" machinery	790 00
" implements	394 50
" produce	2,792 00
" stock	10,725 50
" hand tools	25 75
" miscellaneous, creamery	1,917 00
Horticultural buildings	700 00
" implements	229 25
" stock	303 50
" produce	233 00
" orchards, vineyards and small fruits	3,552 05
Horticultural growing crops	1,280 00
" greenhouse property	125 00
" other supplies	110 50
Total	$ 188,617 12

REPORT OF THE APPRAISEMENT COMMITTEE.

A. & M. COLLEGE, MISS.,
November 29th, 1889.

To the Honorable Body, the Legislature of Mississippi:

In performance of our duty as appraisers of the property of the Agricultural and Mechanical College of Mississippi, we beg leave to say that we have had opportunity to see much of the practical workings of this institution, and we deem it in accordance with the proprieties of the occasion, in addition to our duty as appraisers, to express to the Legislature and to the people of the State our high appreciation of the great success of this College. All of the departments, so far as circumstances allow, are in good working order.

The farm has been put, by much skilled labor, in fine condition. Its pasturage is extensive, and from observation we are prepared to say its crop yields are large and such of these yields as we have seen are of a superior quality, though much of the finest hay and a large portion of the ensilage were destroyed by fire.

The Dairy and Creamery Department, which is a new industry to us, we are told officially, is a success, and we feel that in the near future this industry will add materially to the prosperity of our State by inducing the owners of worn land to engage in a system of farming that will recuperate exhausted soils.

The Horticultural Department, we are informed, has from the beginning, been compelled to struggle against disadvantages caused by meagre appropriations; yet, even with this difficulty to contend with, we have information showing that it is self-sustaining; and we are sure it is doing a noble work in demonstrating the practicability of fruit and truck farming and the profits accruing from diversified industries. We feel that the knowledge here imparted of this system of diversifying will be of lasting benefit to the students, who learn by wise and practical instruction the art of farming by the most economic and hence the most scientific methods, causing the farmer's vocation to become more ennobling and at the same time more prosperous and inviting.

We respectfully call the attention of our legislators to the fact that a Mechanical Department was contemplated in the establishment of this school. We are of the opinion that such a department would add very much to its efficiency, since it is important that the farmer as well as the mechanic should be taught the use of tools. Besides, many of our Mississippi boys may prefer a mechanical education; and on this account, we feel that the school is incomplete without a department in which practical instruction is given in the mechanic arts in addition to the theory of mechanics as now taught.

From facts that have come under our immediate observation, we feel called upon by a sense of duty to urge upon your honorable body the necessity of promptly restoring the barns and other buildings lost by fire, and of appropriating a sufficient sum for the repair and enlargement of the Dormitory, and for the repair of the remaining buildings. As a proof of the necessity for enlarging the Dormitory, when we last night saw the rooms lighted, we instinctively asked how many there were, and were told *one hundred;* yet the enrollment this year has reached two hundred and ninety-three, (293).

On hearing the recitations of many of the students to-day, we are more fully impressed than ever, that liberal appropriations should be made by our Legislature for the support and the enlargement of this institution.

We know by statistical proof, that in the race for success, our agriculturalists have fallen from being the onwners of sixty-two and a half per cent. of the wealth of the country, to the position of owning but twenty-five per cent. of that wealth, and this condition of affairs causes much solicitude among our wisest statesmen. To all reflecting minds, the importance of educating our Mississippi boys of the Anglo-Saxon race to industrial pursuits, and especially to agricultural pursuits, is evident, if we wish our posterity to retain the lands bequeathed us by our fathers.

The source from which this blessing must come is an educated husbandry; and, as the whole object of this institution is for the furtherance of this cause, and as it is the child of the State, it should fare at least equally with other institutions in the fostering care of the State. We cannot expect it to succeed unless we show that degree of liberality that other States show to like institutions. We have lost many of our professors and instructors, because other States and communities gave them larger salaries, and those officers who have remained (the President, the Professor of English, and the Secretary), in the face of offers of advanced salaries at other institutions, have done so from a spirit of pride, and of love for the institution, and not from a desire for financial gain, as is evidenced by the fact that higher salaries have been offered them in other States. Believing that this Legislature will recognize the fact that our boys are the equals of those in any other State, and that they are entitled to the best executive ability, the best financial management of their affairs, and the best educational instruction, we ask that you strengthen this institution by liberal appropriations for its support and its enlargement.

These are facts of which you are already advised, but which we feel it our privilege to recall to your minds in connection with our duty as appraisers of the College property.

(SIGNED) G. W. DYER,
J. H. BEEMAN,
J. W. HOWARD.

DEPARTMENT OF ENGLISH.

AGRICULTURAL AND MECHANICAL COLLEGE OF MISSISSIPPI,
November 12th, 1889.

Gen'l S. D. Lee, President:

DEAR SIR—In accordance with your request and in conformity to precedent and law, I submit the following report of the organization and work of the Department of English, and also of the condition of the Library during the sessions of 1887-88 and 1888-89:

During the last two years, every endeavor has been used to make this department supplement and aid the work of the industrial departments, by directing the thought of the students to industrial education, to the achievements of scientific agriculturists and horticulturists, to the wide extent of agriculture as an employment, to the organization of labor, and to other industrial subjects. This has been accomplished by the character of the student's collateral reading, and by the assignment as subjects for essays and addresses of the freshest industrial topics of the hour. In addition to this, the aim of the department has been twofold: 1, To give such knowledge of our vernacular as makes the student accurate and ready in the use of spoken and written English; 2, To afford such a liberal culture in literature as conforms the student's taste to a correct standard, and stimulates his natural aptitude for the expression of original thought.

To this department also is assigned three other subjects that in most institutions are considered of sufficient importance to be erected into a separate department and to demand the services of a separate professor. These three subjects are Political Economy, History and Civil Government. Covering such wide circle of thought, this department entails upon its professor an unusually large amount of labor.

The course of study has been materially extended since the present incumbent took charge six years ago, and now embraces the following subjects as taught in the four college classes:

FIRST YEAR (FRESHMAN).

A study of the English sentence into its various forms and relations (first and second terms); a study of English phonology and of elocution, three hours per week (first and second term); a study of English composition, three hours per week (first and second terms); English etymology, with lectures on the origin and relation of languages (third term); English history, with essays on assigned subjects (third term); declamations before the Faculty and Corps of Students (third term).

Work Done.—During the session of 1887 and 1888, eighty-three (83) students were enrolled in Higher English: of this number fifty (50) only came to examination at the close of the second term; and of these forty (40) passed to an advanced class.—In English Etymology (third term), sixty-eight (68) were enrolled, forty-three (43) came to examination, and thirty-seven (37) passed. In English History (third term), seventy (70) students were enrolled, fifty-one (51) came to examination, and forty-one (41) passed. In composition, eight hundred and twenty-five (825) essays were criticised, besides very many shorter written exercises. In Elocution, seven hundred and five (705) declamations were delivered. The collateral reading of this class was directed, as far as our library will allow, to the biographies of the leading industrialists of history.

During the session of 1888-89, ninety-two (92) students were enrolled in Higher English: of this number seventy-three (73) stood the examination held at the close of the second term, and forty-nine (49) "made the rise." In English Etymology (third term), seventy-five (75) students were enrolled, fifty-seven (57) came to examination, and thirty-one (31) passed. In English History (third term), seventy-five (75) students were enrolled, fifty-two (52) came to examination, and thirty-two (32) passed. In Composition, nine hundred and fifty-seven (957) essays were criticised, besides many minor written exercises. In Elocution, eight hundred and forty-one (841) declamations were delivered, fifty-one having been delivered before the Faculty and Corps of Students. The collateral reading of this class was directed, as far as possible, in an industrial line.

SECOND YEAR (SOPHOMORE).

Rhetoric is studied for two terms in the second collegiate year, the class discussing the various subdivisions of concord, clearness, unity, energy, and harmony in the construction of the English sentence; the origin and use of figures of speech; the elements of real, logical, verbal, and æsthetic criticism. Each member of the class submits, for the criticism of the head of the department, five essays that are read before the class; and each member of this class delivers before the Faculty and Corps of Students an address upon some industrial or scientific subject, competing for a place at commencement.

Work Done.—During the session of 1887-88, there were forty-eight (48) members enrolled, thirty-nine (39) who stood the examinations, and twenty-five (25) who passed. There were many written exercises submitted by this class; and forty-one (41) students delivered addresses on industrial or scientific subjects before the Faculty and Corps of Students.

During the session of 1888-89, there were fifty (50) students enrolled in the study of Rhetoric; thirty-seven (37) of this number came to examination, and thirty-three passed. A large number of written exercises were submitted for criticism, and forty-three (43) members of the class delivered addresses upon industrial or scientific subjects, and eight (8) of these addresses were presented at commencement.

THIRD YEAR (JUNIOR.)

The first term of the third collegiate year is devoted to the study of Civil Government, especial attention being given to the study of the evolution of the Constitution of the United States. Two essays on assigned subjects are read before the class by each of its members, and these essays are publicly criticised by the head of the department and by the students who are pursuing this study. Each member of this class delivers an address on some industrial or scientific subject before the Faculty and Student Body.

Work done.—For the session of 1887-88, twenty (20) students were enrolled in this study, sixteen (16) came to examination, and sixteen (16) passed creditably. Two extended essays were submitted by each member of this class, and one address was delivered by each before the Faculty and corps of Students.

For the session of 1888-89, sixteen (16) students were enrolled in the study of the Constitution, fourteen (14) came to examination, and fourteen (14) passed. Each member of the class submitted two extended essays, and delivered before the corps of students an original address upon an industrial or scientific subject.

The Second Term of the third collegiate year is devoted to the study of the History of English Literature; and it is here thought proper to review the historical etymology studied in the first collegiate year, and to ascertain the relation of English to the the other languages of the world. Two extended essays by each member of the class on subjects assigned in connection with the history of our language and literature are read before the class and submitted to the criticism of the professor and of the members of the class. One address on an industrial or scientific subject is delivered before the Faculty and student body by every regular student taking the work of this term.

Work Done.—The number of students enrolled in English Literature during the second term of the session of 1887-88 was twenty-three (23), eighteen (18) of whom passed the required examinations. Each student wrote two extended essays, and eighteen (18) students of this class delivered one address each, making fifty-eight (58) papers submitted for criticism.

During the session 1888-89, twenty-one (21) students took English Literature, sixteen (16) passed the required examinations, and there were forty-nine (49) papers submitted for criticism.

The Third Term of this Collegiate year is devoted to General History. The instruction is given by text-books, lectures, explanations and illustrations, supplemented by essays from students to whom are assigned for research certain subjects covering the important turning-points in the history of mankind. Each student presents two essays during the term, and at its close delivers an address on an industrial or scientific subject before the Faculty, seven of these addresses being presented at commencement.

Work Done.—During the session of 1887-88, twenty (20) students took General History, sixteen (16) stood, and thirteen (13) passed the required examinations; sixteen addresses were delivered before the Faculty, six (6) of which were presented at commencement.

Sixteen students were enrolled in General History during the session of 1888-89; thirteen (13) came to examination and twelve (12) passed. There were thirty-two (32) essays submitted for criticism and thirteen (13) addresses delivered before the Faculty, seven (7) of which were presented at commencement.

FOURTH YEAR (SENIOR.)

The First Term of the Senior year is devoted to potitical economy, special attention being paid to agricultural economy. The waste to the farmer from poor and insufficient stock, from lack of capital, from improper rotation, and from other economic causes, are pointed out and carefully discussed. One subject is assigned to two students, who discuss it in written essays from different points of view, and a general class discussion follows the presentation of these papers. This work is very interesting, and students take the greatest delight in preparing two papers each during this term. I know of no work in the whole course that so thoroughly stimulates thought. Each member of the class prepares an addresa on some industrial or scientific topic, which is delivered before the Faculty and body of students.

Work done.—During the first term of the session of 1887–'88, twenty-two (22) students were enrolled in political economy, twenty-two (22) passed the required examination. Forty-four (44) essays, and one address each, making sixty-six (66) extended papers were submitted for the criticism of the professor in charge.

During the same term of the session of 1888–'89, eighteen (18) students were enrolled in this study, and fifteen (15) passed approved examinations. Each student applying for graduation presented two extended essays and one address, the latter being delivered before the Faculty and the corps of students.

In the second term a history of Universal Literature is studied by the class, the short time permitting a bird's-eye view only of this vast field. Still, students are well satisfied with the introduction they get to this subject. Two essays connected with this study, and one address on an industrial or scientific subject, constitute the written work of each classman for this term. The address is delivered before the Faculty and the corps of students.

Work done.—In the second term, session of 1887–'88, twenty-two (22) students enrolled themselves in the General Literature class, twenty-two (22) were examined, and twenty-two

(22) passed. They each submitted two (2) critical essays on the works of persons noted in literature.

In the same term of the session of 1888-'89, eighteen (18) members enrolled themselves for the study of Botta's History of Universal Literature; fifteen (15) came to examination, and fourteen (14) passed. Two essays each were presented by the members of the class.

During the third term this class completes the English course by a study of the philosophy of style, applying the principles of criticism in the examination of some notable English classic. One essay is read before the class by each member. and a graduating thesis is prepared, which is afterwards delivered before the Faculty, each student competing for a place at commencement.

Work done.—During the session of 1887-'88, twenty-two (22) men passed the required examination; each member read before the class two essays, which were criticised by both the professor and the class, and each member delivered a graduating thesis before the Faculty, six of these being presented at commencement.

During the session of 1888-'89, fifteen (15) members were enrolled, and fifteen (15) passed the required examination, each having presented an approved essay. Fifteen (15) graduating thesis were delivered before the Faculty, and five (5) of these were were presented at commencement.

FIFTH YEAR (POST-GRADUATE).

During the session of 1887-'88, there were three (3) gentlemen who took logic, and passed approved examinations. There were also three (3) gentlemen taking the post-graduate course in English, who presented five (5) essays as a part of this work.

During the session of 1888-'89, there were three (3) gentlemen who passed approved examinations in Psychology, one completing the course required in English of a post-graduate.

THE LIBRARY.

As Librarian of the Agricultural and Mechanical College of Mississippi, I have the following report to submit:

The number of bound volumes now belonging to the Library is three thousand and seventeen (3017), one hundred and eighty-two (182) volumes having been added by purchase, donation and exchange. Of the whole number twelve hundred and sixty-five (1265) are public documents of the general government; four hundred and eighty-six (486) are public documents received from the different States; five hundred and fifty-one (551) belong to the scientific department of the College; six hundred and fourteen (614) are in the literary department; the remaining one hundred and one (101) volumes are classed as miscellaneous.

There are of unbound works two thousand three hundred and fifty (2,350) pamphlets, and two thousand six hundred and seventy-seven (2677) magazines and other periodicals, besides files of the leading journals of the metropolitan press. Many of the State papers also, through the kindness of their editors and proprietors, reach the reading room weekly without cost to the Library.

I especially call your attention to the great lack in this department of the College, and ask you to urge the Legislature to make an appropriation that we may have a Library worthy the dignity and reputation of this institution.

There has been spent in the last two years for magazines, papers, etc., two hundred and sixty dollars and ninty-five-one-hundreths ($265 95-100.)

Mr. W. I. Pickens, the present student Librarian, is a most painstaking, prompt, energetic and efficient assistant, and I commend his faithful and impartial work.

GENERAL REMARKS.

We are greatly in need of desks for the two rooms in which English is taught. I am in constant receipt of letters from former students who are unanimous in saying that the large amount of written work in the department of English is very valuable in education. With desks, the efficiency of this work could be *doubled.*

My connection with Professor White, adjunct in English, has been pleasant, and I commend his painstaking and laborious work in the Freshman class and his work in General History with the Junior Class. His services are valuable to the department.

To your uniform support in the management of my department, I am largely indebted for its present efficiency.

All of which is respectfully submitted.

W. H. MAGRUDER.

DEPARTMENT OF MATHEMATICS.

AGRICULTURAL AND MECHANICAL COLLEGE,
November 15, 1889.

General S. D. Lee, President:

SIR—I have the honor to submit the following report as Professor of Mathematics:

I assumed charge of this department on September 18, 1889, relieving Second Lieutenant H. C. Davis, Third Artillery, U. S. A. I have been ably assisted in my work by First Lieutenant J. V. White, First Artillery, U. S. A.

FRESHMAN CLASS.	Enrolled.	Examined.	Passed.	Class at present.
Algebra, (Wentworth's), 1887-8	79	58	34	....
Algebra, (Peck's Manual), 1888-9	87	62	37	....
Algebra, (Peck's Manual), 1889-90	94	..	..	86

SOPHOMORE CLASS.	Enrolled.	Examined.	Passed.	Class at present.
Geometry (Wentworth's Plane and Solid), 1887-'88	35	27	18	....
Geometry (Wentworth's Plane and Solid), 1888-'89	34	29	23	....
Geometry (Wentworth's Plane and Solid), 1889-'90	41	..	..	41
Trigonometry (Wentworth's Plane and Spherical), 1887-'88	21	20	17	....
Trigonometry (Wentworth's Plane and Spherical), 1888-'89	28	28	21	....
Surveying (Wentworth's Theoretical and Practical), 1887-88	19	16	16	....
Surveying (Wentworth's Theoretical and Practical), 1888-'89	28	28	24	....

JUNIOR CLASS.	Enrolled.	Examined.	Passed.	Class at present.
Mechanics (Peck's), 1887-'88	18	18	17	....
Mechanics (Peck's), 1888-'89	15	14	14	....
Mechanics (Peck's), 1889-'90	26	..	..	25
Lectures in Analytical Geometry, 1887-'88	18	18	18	....
Lectures in Analytical Geometry, 1888-'89	15	15	13	....
Lectures in Analytical Geometry, 1889-'90	26	..	..	25

SENIOR CLASS.	Enrolled.	Examined.	Passed.	Class at present.
Astronomy (Whites), 1887-'88	22	21	21	....
Astronomy (Peck's Popular), 1888-'89	18	15	15	....
Civil Engineering (Lectures), 1887-88	22	21	21	....
Civil Engineering (Lectures), 1888-'89	18	15	15	....

Note.—The difference between numbers enrolled and examined in the lower classes is accounted for largely by the fact that many enter on trial and fail to keep up.

The Freshman Class studies Algebra from opening of session to about middle of third term. The class is examined at the close of the first term on that part of the book which has been passed over.

A final examination is also given when the class completes the study, and those who have passed take up Geometry preparatory to next year's work. Those who do not pass continue the study of Algebra until the close of the session, at which time they get a re-examination.

Sophomore Class is instructed in Geometry from opening of the session to about the first week in February. The remainder of the second term is devoted to Trigonometry.

The third term is allotted to Surveying, Theoretical and Practical.

For field or practical work, the Sophomore class is divided into teams of from four to six students each. The work is so arranged that all students are required to familiarize themselves, in turn, with each of the duties incident to surveying and plotting fields, calculating areas, running levels, and measuring angles.

Each session, in this way, several fields are surveyed with compass and plane table. Levels are run, and side-hill ditches are staked out.

In all this work the students handle the instruments themselves, make their own calculations and plots, the instructor merely supervising and directing.

The Junior Class is instructed in Analytical Geometry and Mechanics during first and second terms. The former course is quite brief, and is given in a course of lectures.

In Mechanics, every effort is made to give practical instruction, but lack of equipment (mentioned below), renders this all but impossible. The problems are practical, relating to requirements of every-day mechanics.

This class has no mathematics in the third term.

The Senior Class has been engaged in the study of Astronomy during first term, but in future Astronomy will be taught in the third term. The class is instructed in Civil Engineering during second term. As in Mechanics, means of illustration in Civil Engineering are entirely wanting, and also there are not sufficient books of reference in this course. The course of lectures on Engineering is a limited one. It treats of building materials in the general sense; strength of materials; framing and building; bridge and roof trusses; strains on parts; foundations on land and in water; excavations, etc.

The Freshman Class has also a course in Book-keeping, taught them during the third term. This subject is taught as practically as possible during the entire course.

In addition to the regular course in Mathematics I am giving an extra course of lectures on the Theory of Determinants, Analytical Geometry and Conic Sections for the Junior and Senior classes. The lectures are conducted on University style, and the students manifest considerable interest in them.

An examination of foregoing table will show the two parts into which the course in Mathematics is divided.

First.—Pure Mathematics, to include two terms of Sophomore year; and

Second.—Applied Mathematics, the remainder of the course. Thoroughness in first part is essential to a correct understanding of the second, and for this reason it is insisted on before a student is advanced.

While the first course is purely preparatory, the second is full of advantage to the student. Here he gathers the results of previous year's study.

Especially is Applied Mathematics of advantage to the students of an institution like this, the genius of which is to give a practical everyday education.

The department is hampered in its efforts to give such practical instruction, by entire lack of appliances and apparatus as means of illustration, and for application of theory to practice.

In surveying, leveling, etc., the proper instruments are at hand, and good use is made of such equipment as has been granted. (See Sophomore Class, in remarks after table).

With this showing I most respectfully request that some equipment be granted the Mathematical Department, and some books of reference on that subject be added to the College Library. This is a pressing need and one which asks attention.

I append a list of articles which would add greatly to the teaching facilities of the department.

The method of *object lessons* is now generally adopted to instill first principles, and I respectfully ask the means to follow this method.

I ask for the following:

MEANS OF ILLUSTRATING MECHANICS.

Articles.	Catalogue Price.	
The parallelogram of forces	20 to 50	Marks.
The bent lever	30 to 45	“
The inclined plane, with graduated arc, and arrangment to make the force act parallel to the base	36 to 50	“
The screw	5	“
The endless screw	50	“
The apparatus for illustrating the laws of the wedge	12 to 25	“
Blocks and pulleys on stand	50 to 80	“
Apparatus for explaining laws of the lever	35 to 50	“
Simple windlass	20	“
Differential windlass	30	“
Apparatus for explaining the laws of stable equilibrium	24 to 35	“
Apparatus for explaining the law of equal transmission of pressure	250	“
Apparatus for showing parabolic motion of projectiles	25	
Centrifugal machine to stand horizontal or vertical	30	“
Flattening of the Earth	18	“
Bohenberger's apparatus for explaining the revolution of the earth on its axis	27	“
Gyroscope, after Fessel, with counterpoise of 7½ cms	30	“
Crank handle and axle	15	“
Chain pulley with single groove	34	“
Breast wheel constructed of timber	175	Marks.
Overshot wheel constructed of timber	180	“
Low pressure turbine wheel with guide blades	430	“
Independent wharf crane	150	“

MEANS OF ILLUSTRATING CIVIL ENGINEERING.

Portion of house corner with frame work	14	Marks.
A. Frame work of simple beams	27	“
B. Frame work of crossed beams		
C. “ “ “ “ with furry		
Single timber connections, 1 to 73, Schroder's collection	116	“

Double beam construction	62	Marks.
Simple shed roof, height—length	14	"
Simple shed roof, with collar beams.......	15	"
Shed roof, height ¼ length	16	"
Roof truss, height ⅛ length...............	26	"
Vertical roof truss with single collar braces, collar beam	26	"
Various stone facings and joints	5	"
Door and window semi-circular arch	11	"
Elliptical and parabolic arch	14	"
Models of simple King and Queen post truss, framing ditches for draining meadows, securing embankments and dams	53	"
Books of reference on architecture, etc....	$50	

The above list is very complete, and possibly beyond the ability of the State at present. I ask, however, that something, if not all asked, be granted. Eight hundred or one thousand dollars will fit up the department in this line very well. I again ask for something, as the department is at present in much need.

I cannot conclude this report without once more respectfully but earnestly, asking recognition of the Mechanical feature of the College.

The law establishing the College grants money to advance the agricultural and mechanic arts. I am the more pressing in this matter as the honorable Board of Trustees has expressed itself as willing to proceed in the matter so soon as means is provided.

I recommend that this department be granted means to extend its scope to practical mechanics, viz: Instruction in use of machinery for wood and metals, and also to instruction in handling, setting up and running engines and other machines.

From a comparison with the previous reports from this department, it may be seen that this request has been made before, which shows it has been under consideration for some time.

To have a class handle, set up, and run one engine would more than double the instruction given and the benefit received.

Property belonging to Mathematical department: 1 vernier solar transit; 1 theodolite; 1 plane table; 1 vernier compass; 1 New York rod; 1 Y level; 20 loaded pins; 166-foot steel chain (broken).

The above instruments have been in constant use in the Department of Agriculture, Horticulture and Mathematics, and are in good condition considering the use made of them.

I wish to express my thanks to my assistant for his earnest and good work.

Very respectfully submitted,

B. M. WALKER,
Professor of Mathematics.

FARM DEPARTMENT.

AGRICULTURAL COLLEGE, MISS., }
November 15, 1889. }

Gen. S. D. Lee, President:

SIR—The following report of operations and results performed in the Agricultural Department for the year 1888-'89, is respectfully submitted.

This report of the department embraces much that has been accomplished by Prof. Gully, (November 15, 1887—March 1888), and by Prof. Irby, (March, 1888—June 1889), my predecessors. Having had charge of the department only since June of this year, many of the facts here reported were gathered, necessarily, from previous annual reports.

My duties consist of the following: First, Instructor to members of the Freshman Class on the theory of stock-breeding, the practical care of herds of cattle, management and training of horses, and general lecture on the handling of live-stock. The Sophomore Class is instructed in the management of field crops, harvesting of same, improved farm machinery, drainage of lands, etc. The Senior Class is given special instruction in the feeding of all stock, and in matters of farm economy.

Second, Supervision of student labor in the field, and explanation of plans for improvement of soil, rotation of crops, etc.

Third, Answering letters of correspondents inquiring for plans of barns, facts about ensilage, and other special crops, qualities of the improved herds of cattle, system of crops adapted to worn soils, the management of dairy herds and creameries, fertilizers, grasses, farm machinery, implements, etc. Many of these letters come from parties living in various portions of the Southern States.

Fourth, Superintendence of the College farm, comprising some 1,500 acres under fence, and stocked with cattle.

Fifth. As Agriculturalist of the Experiment Station, I make reports to the Station Director of work done in his department and supervise the handling of crops and teams.

Sixth. The correction and approval of student essays upon subjects in this department and the work of post-graduates, (resident and non-resident), taking the agricultural course.

STUDENT LABOR.

A sum of money specially appropriated for student labor in the fields has been expended since the last report, thus providing for illustration of the principles taught in the academic departments. Although this labor is in no way renumerative to the department, yet it is a source of much assistance to the poor and deserving boys of the State as well as affording the means of practical illustration of theories taught in the class-rooms. The greater part of such labor is expended on care and feeding of cattle, because this is the most convenient and instructive labor for students. The great distance of many fields from the dormitory renders it impossible to utilize student labor profitably in the fields, as they have but two and three hours per day for work. It is not advisable to work our teams with labor that is so intermittent, therefore a certain number of hired hands are kept as teamsters. So far as is possible all hand labor is performed by students. Viewed from a standpoint of instruction and judicious assistance to boys of moderate means the student labor system as used here has been productive of much good.

IMPROVEMENTS.

For the past five years the farm has been self-sustaining, and in addition the following improvements have been made, during the past two years, which add materially to the value of the College farm. Much labor has been expended in clearing and draining foul land. By judicious pasturing and cultivation much organic matter has been added to the large amount of poor soil formerly in the College tract. The proportion of pure bred and graded cattle to the general herd has greatly increased in the past two years. During the spring of the present year the barns and out-buildings received a fresh coat of paint. An eight-horse power engine and boiler was supplied in the spring of 1889 to the creamery.

A forty acre tract of land lying near the College buildings and convenient for farm work has been added to this department since our last report.

In addition to these facts the acreage set to permanant meadow has been more than doubled.

CATTLE.

The College herds are the principal sources of revenue of the farm department. The system of management has led to the raising of milk, beef, and pure bred cattle distinctively.

Our milk supply is derived from a herd of grade Jersey cows, headed by three pure-bred bulls. Cows are milked nine months in the year by students from the various classes and three months by such outside labor as we can obtain. A market for the milk is found at the College creamery, and by supplying fresh milk to the Mess Hall.

All male calves (not pure-bred), and unprofitable cows of the milk herd are run at large in the pastures of the department and are butchered by the Mess Hall.

Our several herds of pure-bred cattle consist at present of Holsteins, Devons and Herefords. These have been bred for sale and for the instruction of students on the subject of breeds.

Our experience proves the milk herd to be the most profitable of those we carry.

FARM CROPS.

Of the various crops raised on the farm, all except cotton are fed, directly or indirectly, to the cattle.

STATEMENT OF ACREAGE OF 1888.

108 acres of corn, producing 2,500 bushels.
30 acres of ensilage, producing 225 tons.
15 acres of oats (hay), producing 15 tons.
*10 acres of cotton, producing 2½ bales.
60 acres of meadow, producing 150 tons.
10 acres of forage (grazed).
15 acres of peas planted, 20 bushels.
20 acres of melilotus (grazed).

STATEMENT OF ACREAGE OF 1889.

130 acres of corn, producing 2,750 bushels.
40 acres of cotton, producing 10.2 bales.
40 acres of oats, producing 1,000 bushels.
30 acres of ensilage, producing 250 tons.
1 acre of sugar-cane, producing 100 gallons.
30 acres of red clover, producing 120 tons.
40 acres of melilotus (grazed).
15 acres of grasses (grazed).
10 acres of peas (grazed).
60 acres of melilotus (mowed), 40 tons.
8 acres of Johnson grass, 25 tons.

The cotton crop of this year was located on cold lands, much of which was well seeded in chicken corn. The heavy rains of June caused the stand to be injured by constant hoeing. The army worm in July attacked the entire field, and but for the use of Paris green, would have destroyed a large part of the crop.

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* Crop almost destroyed by overflow in July.

LABOR STATEMENT FROM NOV. 15, 1887, TO NOV. 15, 1888.

	Students.	Men.	Mules.
	Days.	*Days.*	*Days.*
Buildings		7	8
College		30.5	30
Cotton	7.9	251.7	224.5
Corn	96.7	224.5	262.5
Dairy	47.3	2	
Ensilage		196.5	146.5
Experiment Department	6.2	200.8	211.5
Fence	12.3	41.5	14
Hay		557.5	500.5
Manure		21.5	44
Oats		84.2	76.5
Office	59.35		
Peas		10.5	11.5
Permanent improvements	204.7	25.4	3.5
Rye		27	51
Roads	3.25	35.5	45.5
Sugar-cane		10	12
Stock	1,273.2	169.5	37.5
Tools	66.1	10.5	5.5
Wood		46.8	82

LABOR STATEMENT FROM NOV. 15, 1888, TO NOV. 15, 1889.

	Students.	Men.	Mules.
	Days.	*Days.*	*Days.*
Buildings		7	8
College		30.5	30
Cotton	7.9	251.7	234.5
Corn	96.7	224.5	262.5
Dairy	47.3	2	
Ensilage		196.5	146.5
Experiment Department	6.2	200.8	211.5
Fence	12.3	41.5	14
Hay		557.5	500.5
Manure		21.5	44
Oats		84.2	76.5
Office	59.35		
Peas		10.5	11.5
Permanent improvements	204.7	25.4	3.5
Rye		27	51
Roads	3.25	35.5	44.5
Sugar-cane		10	12
Stock	1,273.5	169.5	37.5
Tools	66.1	10.5	5.5
Wood		46.8	82

LABOR.

The wage system of labor is the one adopted by this department. Five regular hands do the ploughing and hauling of the farm. Hoeing is done by the students and day-labor. One herder for cattle and the foreman of the farm constitute the working force of the department.

LOSS BY FIRES.

The farm department suffered a severe loss through the incendiary burning of the main barn on the evening of September 22, 1889. An inventory loss by this fire has been handed you, consisting of a large collection of improved implements and machinery, 150 tons of hay, 100 tons of ensilage, 700 bushels of oats, the wagons of the department, and the large main building besides. This loss aggregated $5,933. Again, on October 23d, the department sustained another loss in the burning of the lower barn, filled with hay, which had been stored after the burning of the first building. This was a loss of $800, and throws the department almost without feed for the wintering of 350 head of cattle and 13 head of work-stock.

The lower barn was the place of shelter for the greater part of the College herd, and its loss must be severely felt during the coming winter, as it has been impossible to replace any part of the building.

FINANCIAL STATEMENT.

From November 15, 1887, to November 15, 1889.

RECEIPTS.

Beef cattle	$ 5,037 13	
Pure bred cattle	1,693 25	
Milk	2,389 64	
Butter	2,049 86	
Field crops	1,732 86	
Mules	130 00	
		$ 13,032 74

DISBURSEMENTS.

Paid labor	$ 5,170 88
" Beef cattle	1,715 58
" Pure bred	91 36
" Machinery and implements	1,542 41
" Feed	1,585 70
" Buildings	321 98
" Fertilizers	212 90
" Fencing	74 85
" Seeds	420 88

Paid Repairs	189 09	
" Printing, postage & stat'n'ry	113 45	
" Mules	560 00	
		$ 11,999 08

J. H. CONNELL.

STATEMENT

Of Farm Department from Nov. 28th, 1887, to Nov. 28th, 1889.

RECEIPTS.

By Balance, printed Report 1887,	$ 76 50	
" Sale beef cattle	5,037 13	
" " Pure bred cattle	1,693 25	
" " Milk	2,389 64	
" " Butter	2,005 55	
" " Field crops	1,732 86	
" " Mules	130 00	
		$13,064 93

DISBURSEMENTS.

To Amount paid for labor	$5,170 88	
" " " Beef cattle	1,715 58	
" " " Pure bred cattle	91 36	
" " " Machinery and implements	1,542 41	
" " " Feed	1,585 70	
" " " Buildings	321 98	
" " " Fertilizers	212 90	
" " " Fencing	74 85	
" " " Seeds	420 88	
" " " Repairs	189 09	
" " " Printing, postage and stationery	113 45	
" " " Mules	560 00	
" Balance	1,065 85	
		$13,064 93

CHEMICAL DEPARTMENT.

AGRICULTURAL AND MECHANICAL COLLEGE,
November 15th, 1889.

General S. D. Lee, President:

SIR—I submit herewith the biennial report of the Chemical Department for the sessions of 1887–8, 1888–9 and up to November 15th of the present session.

Prof. John A. Myers had charge of this department until the close of the session of 1887–8. Dr. B. von Herff discharged the duties of head of the department from that time until August 24th of the same year, since which time the work of the department has been under our supervision.

This department gives instruction to each of the four college classes. The Freshman Class is instructed in Elementary Physics, the Sophomore Class in General and Practical Chemistry, the Junior Class in Agricultural Chemistry, and the Senior Class in Meteorology and Chemical Technology, while under Prof. Myers the Seniors studied Chemical Physics instead of Chemical Technology.

FRESHMAN CLASS.

The number of students that entered this class in 1887–8 was essentially the same as given in the catalogue of that year. Forty-one stood the examination given at the end of the term, twenty-one passed. Eighty-five entered this class the last session, sixty-one of whom stood, and thirty-one passed the examination.

The study pursued by this class embraces a study of the theory of the constitution of matter, the philosophy of the three states of matter, Dynamics, Heat, Electricity, and Magnetism, Sound and Light.

While Physics is rather a difficult study for the students of our Freshman Class, yet the entire class gains a great deal of useful information and training, while the more matured members of the class obtain quite a satisfactory knowledge of the different subjects treated.

The teaching is done by questioning on lessons assigned in the text-book and lectures illustrated by experiments. When there is a deficiency in apparatus for demonstrating a principle, diagrams of appropriate apparatus are drawn on the board and the explanations are then made from the diagrams. The method used for teaching this class is continued through all the classes, except that more time is given to lecturing to the higher classes.

SOPHOMORE CLASS.

The work of this class during the latter part of the session of 1887-'8 was somewhat interrupted by the improvements that were then going on in the laboratory. Twenty-five students stood the examination in Elementary Chemistry, seventeen passed; in blowpipe analysis twenty-one stood the examination and seventeen passed; seventeen stood and fifteen passed the examination in Wet Analysis. During the session of 1888-'9, forty-five students entered the Laboratory. Twenty-one passed the examination in Elementary Chemistry; twenty-seven in Blowpipe Analysis and eighteen in Wet Analysis.

The Elementary Chemistry includes a study of the elementary forms of matter, their occurence, preparation and properties, together with some of their most useful compounds. This is taught principally by means of lectures and experiments. In teaching Blowpipe Analysis each student is given a well arranged desk furnished with gas and water. Each desk is supplied with a complete set of apparatus and reagents. The practical work consists in determining simple salts at first, followed by mixed salts and minerals. The course in Wet Analysis includes a separation of the metals into groups, the separation of the different members of each group from each other and the detection of the most important mineral and organic acids.

JUNIOR CLASS.

This class studies Agricultural Chemistry five hours a week during the last term. The formation and properties of soils; the growth of plants, the sources of plant food and the methods by which they are assimilated, the object and methods of tillage, the action of special fertilizers and the occurrence, manufacture and uses of the various fertilizers and manures are some of the leading snbjects embraced in this study. Sixteen men entered this class in 1887–'88 and all passed their examination. Of the sixteen members of the class in 1888–'89, eleven passed the examination.

SENIOR CLASS.

Meterology and Chemical Technology are studied by this class the last two terms of the session. In 1887-'8 the class numbered twenty-two; all passed the examinations. Of the fifteen members last session, all passed in Meteorology and fourteen passed in Technology.

The composition, extent and properties of the atmosphere, fogs, dews, frosts, snows, rains, winds and auroras, are the principal subjects studied in Meterology. The extraction of the useful metals from their ores, the preparation and manufacture of various articles of food, clothing, earthenware, glass, chemicals, etc., are among the things studied in Technology.

The present session the Freshman Class numbers eighty-five and the Sophomore forty-five.

The text-books used by the department are: Gage's Elements of Physics, Cooley's New Chemistry, Nason's Blowpipe Analysis, Storer's Agriculture, Loomis' Meteorology and Wagner's Chemical Technology.

APPARATUS.

There is a marked deficieney of apparatus for teaching physics. Nearly every price of apparatus we have is out of repair and was out of repair when put in our charge. By all means this apparatus should be put in good condition. With an appropriation of five hundred dollars for the repairs and purchase of apparatus for this department the study of physics could be made more profitable to the students.

OFFICIAL RELATIONS.

Mr. H. H. Harrington, the assistant in this department, resigned in January, 1888, to accept the professorship of chemistry in the Agricultural College of Texas. His place was filled by Mr. B. W. Kilgore until July 1, 1889, when he was granted a leave of absence for one year. He has since accepted a position as first assistant in the laboratory of the Experiment Station of North Carolina. Mr. J. S. Merry, a student of the Senior Class, is now employed to make the fertilizer analysis and to do other analytical work for the State. He makes quite an efficient help.

We would express our indebtedness to the president for valuable suggestions concerning the affairs of the department.

Our relation as Chemist of the Station has been pleasant. We think it would be well to continue the chemical work here as at present.

Below is given a tabulated statement of the analytical work done during the last year:

TABLE OF ANALYSIS.

Analysis of fertilizers	111
Analysis of soils	32
Analysis of marls	33
Analysis of mineral waters	9
Analysis of potable waters	18
Analysis of grasses and clovers	160
Analysis of feeding stuffs	26
Analysis of sacharine juices	45
Analysis of insecticides	3
Analysis of minerals	22
Analysis of milk	13
Analysis of muck	1
Digestion analysis	103
Total	576

Respectfully submitted by

W. L. HUTCHINSON,

Professor Chemistry and Ex-officio State Chemist.

DEPARTMENT OF HORTICULTURE.

AGRICULTURAL AND MECHANICAL COLLEGE OF MISSISSIPPI,
November 15, 1889.

Gen'l S. D. Lee, President:

SIR—I have the honor to submit the following report of the condition of the Horticultural Department:

As this report is upon the work done during the two preceding collegiate years, I can say but little in regard to the work performed, as I took charge of the department on the first of May last, and had no report from my predecessor.

The following, taken from my predecessor's last report to you, will give a correct idea of the instruction given in this department:

Freshman Class—Second term—Instruction in class-room is given on the following topics: Location and preparation of garden and orchard lands. Manures—their preparation and application to different plants; Drainage; Construction and management of hot-beds, cold-frames and propagating houses; when and how to plant trees, seeds, vines, etc.; Budding and grafting; the common insects injurious to garden and orchard products, and how to destroy them.

Junior Class—First Term—The following are among the subjects discussed: Garden, orchard and nursery economy; Varieties best adapted to different soils and latitudes; the pruning and training of trees and vines; the best methods of gathering, packing and shipping horticultural products to distant markets; of preserving and keeping vegetables and fruits and of saving seeds; designs and management of ornamental grounds. While at work in the garden, orchard and vineyard the student becomes familiar with the growth and habits of the different plants, trees and vines cultivated. He learns, by actual practice, the art of propagating from seeds, layers, cuttings, budding and grafting. With his own hands he prunes the orchard and vineyard, plants, cultivates, and harvests the different garden and orchard products, thus acquiring skill and such knowledge of the business as can be obtained in no other way.

Post Graduate Course—Pomology, Floriculture, Landscape Gardening, Forestry, Geography, Botany, Economic Botany, and management of Greenhouses.

STUDENT LABOR.

The bulk of the labor is performed by students, but it is necessary to hire negroes to run the team and assist in gathering fruits and vegetables for market, the students being engaged too much of the time in the class-room to attend to everything alone. It is gratifying to note the growing interest of the boys in this work. They are generally painstaking and industrious, and I notice a great improvement in this respect.

THE GROUNDS.

The horticultural grounds cover an area of about one hundred and fifty acres of land, and one-half of the campus is under the supervision of this department. The cultivated lands are taken up as follows: Orchards, thirty acres; vineyards, three acres; garden, nine acres; strawberries, seven acres; corn, three acres; asparagus, three-fourths acre; total, fifty-two and three-fourths acres.

A very little of this land is at all suitable for garden purposes, but portions of it does fairly well for trees, while by far the larger portion is too poor to grow farm crops profitably upon it. The most of the [illegible] is yet sterile, stiff and cold; but its condition is improving, so that now we have an orchard and berries doing fairly well on land that five or six years since would not grow a good crop of peas.

It may readily be supposed that an attempt to grow porducts under such adverse conditions could not be attended with flattering success. The department is now poorly equipped, nor has it ever been furnished with bare necessaries for conducting the work satisfactorily and with profit. Horticulture is rapidly advancing in this State, and can now be classed as one of our leading pursuits. To-day you can count one hundred in the business where you could count ten half a dozen years ago. The fact, in itself, that a large part of our industrial population is engaged in this work, is enough to demand that they have equal representation in this Institution, and that this department be placed upon an equal footing, in the way of equipment, with the other departments of the College. The interest manifested in the work by a large portion of the student body is increasing each session, and I am sure that if we had the much needed equipments to properly conduct the work and illustrate theories, much good would be accomplished by diverting the boys' minds from the old idea that cotton is the only money crop of this State.

Our location prevents us from successfully competing with growers on main-line railroads in shipping fruits. They, by the use of refrigerators, can place their fruit on the market in better condition and at about one-third the cost that we pay for expressing ours. This, of course, forces the College from Northern markets long before the main-line growers, and usually when our crop is at its best. Virtually having no local market, this fruit is lost, but if we had an evaporator, a large amount of apples, peaches, plums, pears, tomatoes, corn, okra, etc., could be dried during the summer, and would find ready market here when the students return, and most of the above-mentioned evaporated products are staples in the markets of our large cities at renumerative rates. An evaporating outfit is one of our most imperative needs, as the orchards are now just beginning to bear full crops.

The Experiment Station has taken charge of between three and four hundred trees belonging to the department to conduct fertilizer and variety tests. Fertilizers for these trees are furnished by the Station. One-half of the manure accumulated at the College barn is given to this department by an act of the Board of Trustees. This, however, is insufficient for our purpose.

I herewith append a list of the most essential wants of the department, with which we can do the work in a satisfactory manner; without which we must necessarily labor under embarrassment:

A propagating house.

A roomy horticultural building, with apartments for storing different vegetables and dried products, and cellars for winter storage.

A house for keeping tools and implements and for the manufacture and storage of fruit and vegetable boxes and crates.

An evaporator for utilizing fruits that are damaged and unfit for market, and to save the crop after it is no longer profitable to ship.

An additional team, two harrows, and sundry garden implements.

The department has never had a satisfactory outfit, nor has it received any assistance from the State for the past three years; still it has slowly improved its condition, and at the time I took charge was in better shape than I had seen it since my connection with the College six years ago. This work requires capital; with it we can get good and satisfactory results; without it, we must struggle under disadvantages and slowly build up the capital we so much need. A fertile soil is the first consideration, but this we have not, and the only thing to do is to build it up; but an appropriation for the department, sufficient to give it a good working outfit, is what is needed and what we ask for.

Hoping this department will receive the consideration it has so long needed, so that it can at once begin to work to an advantage and to the satisfaction of the people, I am, sir,

Very Respectfully, Your Obedient Servant,

BEN W. SAFFOLD,
Acting Professor of Horticulture.

STATEMENT

Of Horticultural Department from November 28, 1887, to November 28, 1889.

RECEIPTS.

By balance printed report, 1887	$	73 65
Sale vegetables		970 12
Sale fruit trees		64 48
Sale plants		126 18
Sale fruits and berries		1,190 48
Sale mule		90 00
Total	$	2,514 91

DISBURSEMENTS.

To amount paid for labor	$	1,079 20
" " " Implements		323 27
" " " Box material		323 93
" " " Fertilizers		196 40
" " " Mule		150 00
" " " Seeds		130 09
" " " Feed		80 00
" " " Printing, postage and stamps		56 45
" " " Permanent improvements		33 88
" " " Nursery stock		4 00
" Balance		137 69
Total	$	2,514 91

DEPARTMENT OF BIOLOGY.

REPORT OF G. C. CREELMAN, ACTING PROFESSOR OF BIOLOGY AND GEOLOGY.

AGRICULTURAL AND MECHANICAL COLLEGE,
November, 1889.

General S. D. Lee, President.

DEAR SIR: I have the honor of presenting to you the Third Biennial Report of the work done in this department.

As Biology is the science of life, and the agriculturist is directly interested in anything that pertains to the welfare of either animal or vegetable products, I desire to show you how practical work in this department can be made to go hand in hand with scientific agriculture.

By Biology, for instance, we are taught the nature of a plant's food, the mode of absorption and assimilation of that food and the character and composition of the tissues or fruit, as the case may be. Agriculture, taking advantage of these facts discovered by Biology, applies a certain fertilizer, rich in the proper nutritive substance, cultivates the ground, prunes the useless branches, etc., in order that the proper conditions for healthy absorption may be present, and makes use of those parts of the plant which Biological investigation has shown to be of economic value.

Physiology teaches how foods are digested, and what foods are most suitable for the formation of any structure. Agriculture applies this knowledge in fattening live stock, and in rendering more abundant and suitable any particular product.

Biology also affords invaluable aid to the farmer by supplying him with life histories, conditions and existence of hundreds of parasites, which annually destroy so much of the agricultural produce of our country. A knowledge of the life history of these pests, is of course necessary, before we can discuss the best economic means of destroying them.

Keeping all these things in view, I have arranged my work in the following order:

JUNIOR CLASS.

First Term.—During this term, the students are occupied one hour each day, in the study of Anatomy, Physiology and Hygiene.

Anatomy, which is a description of the location and structure of the various parts of the human body, is studied by means of a text-book, supplemented with lectures. This study is greatly facilitated by the use of charts, skeletons mounted and unmounted, and life-size drawings of the different organs.

Physiology, treating of the organs of the body and the functions they perform, is studied in the same way, after which the two are combined and Hygienic lectures added, pointing out the best means for the preservation of health.

Second Term.—Veterinary Science—This consists of a series of lectures on the principles and practice of Veterinary Surgery and Medicine. It embraces the comparative anatomy of the horse and cow, actions, uses and doses of veterinary medicines, causes, symptons and treatment of the most common diseases, which affect domestic animals in the South, and a short course on veterinary obstetrics and breeds of horses.

Practical Work.—The students are taken to the barns and made to handle the horses and mules, judge them by points, and compare first-class animals with those of a lower grade, pointing out the main points of difference, the cause for the same and how to remedy the defects. The teeth are studied as age indicators, and a short list of medicines and instruments noted, which would be useful on every farm that produces live stock.

All sick animals are treated in the presence of the class, and each student is required to write a synopsis of the case, stating the causes, symptoms and treatment of the same; also sick animals brought to me, by stock owners in the vicinity of the college, are, where practicable, treated in the presence of the students.

Thus you will see that there is enough work started here in three months to cover at least a two years course in veterinary science. To show you the necessity for work in this line, and the reason why we should graduate young men in this department, I have only to refer you to my last summer's trip to the Yazoo Delta, during the Charbon outbreak. Here I was all alone in the work, until help could come from the North, as there was not a veterinary surgeon in the whole State of Mississippi. I am glad to see, however, that the farmers of the State are now agitating the question of a State Veterinarian; the same to be veterinarian to the State Experimental Station, and I see no reason why he should not fill the chair in Veterinary Science in this College.

Third Term.—During the last term, the Juniors have two studies in this department.

Economic Entomology is taught with a short text-book, supplemented by lectures which contain the practical results of experiments with insects and insecticides of the several experimental stations of the United States and Canada. Insects are collected and their habits watched and closely studied with a view to finding an easy, practical way of destroying the same.

Structural Botany is taught with a view to making observant of the manifold workings of nature in the vegetable kingdom. Hundreds of plants are analyzed by the class, special attention being given to those vegetables and fruits which are the common products of the farm.

SENIOR CLASS.

First Term.—Zoology, commencing with the lowest orders of animals and passing gradually up the scale to man, all the phenomena of life are noted and carefully studied. Specimens are collected by the class from time to time, and dissected in the class-room, where each student, with note-book and drawing material, writes a description and makes a drawing of all that comes under his notice. Twelve compound microscopes are used, and besides becoming expert in the use of this instrument, the student soon learns to be more observant, and to investigate along lines which their several tastes and talents lead them.

Second Term.—This term is occupied in the study of Geology, and in order to make the subject more interesting, instructive and practical, I have prepared a course of lectures which takes the place of a text-book.

All the points bearing on agriculture are studied, and the various steps explained in the conversion of solid rock into soil. The soil of Mississippi is taken up and its economic products enumerated and described. The valuable collection of minerals and fossils in the College Museum, are here used to advantage in the study of Geology, and at the expiration of the term the class is familiar with all kinds of rocks and their contents.

Third Term.—The Botany of the junior year is now briefly reviewed, after which the attention of the students is directed to the study of Physiological Botany, which treats of the internal structure of the plant. The microscopes are again brought into use, and starting with the minute plant cell as a unit, we build up roots, stem and leaf, until we form a perfect plant. Thus each successive stage is studied, the students doing the practical work themselves, and as in Zoology, making drawings of all phenomena observed.

Throughout the entire course the students evince the greatest interest in their work, and had we a Biological laboratory, fitted up with apparatus for work, like the Chemical laboratory, I am satisfied we could turn out graduates in Biology who would be competent to occupy positions similar to those now held by our promising young men, who received their instruction and obtained their practical information in the Department of Chemistry.

With the apparatus that we now have, I think suitable material could be added, the present rooms better lighted and ventilated, and gas and water supply added, the total cost not exceeding $1,000. Under the present arrangement, while the practical work is thoroughly studied as far as we go, still the cramped position in which we find ourselves, necessitates only elementary work.

My work in all the studies of the department has been rendered light and comparatively easy, owing to the thorough instruction given, and the solid foundation laid by D. L. Phares, M. D., my honored and esteemed predecessor.

G. C. CREELMAN,
Act. Prof. Dept. Biology.

DEPARTMENT OF MILITARY SCIENCE.

AGRICULTURAL AND MECHANICAL COLLEGE,
November 6, 1889.

Gen. S. D. Lee, President:

SIR—I have the honor to submit the following report as Professor of Military Science and Tactics, and Commandant of Students:

In compliance with Special Orders No. 98, of April 27, 1889, from the War Department, I reported to you on June 3d, last, relieving 2d Lieut. H. C. Davis, 3d Artillery, U. S. A., on July 1st. As I have had actual charge of the Military Department only since the beginning of the present session, the greater part of this report is taken from those of Lieut. Davis for the two preceding years.

ORGANIZATION.

The students are subject to military discipline, and for that purpose and for drills, are organized into a battalion of five companies, with one field officer (a major), the usual staff, and field music. Four of the companies comprise the students rooming in the dormitories, and the other company, those living outside. At present there are 236 of the former, and 47 of the latter, making a total of 283 on the rolls.

In this report of June 1st, 1888, Lieut. Davis gives the total enrolled 283; present May 1st, 210; withdrawn, 73. In 1889, total enrolled, 318; present, May 1st, 227.

THEORETICAL INSTRUCTION.

During both years the Course of Study was as follows:
Senior Class, six weeks in the Art of War.
Junior Class, six weeks in the Infantry Tactics.
The classes numbered as follows:
1887-'8. Senior Class, 20.
Junior Class, 18.
1888-'9. Senior Class, 16.
Junior Class, 15.
All of whom passed.

During last winter the non-commissioned officers and the privates of the Sophomore class recited in tactics to their captains.

The subject of Military Science having just been changed to the Junior Class, I have two classes to instruct therein during the present session. The Senior Class are now in that subject, and the Juniors will have theirs in the third term.

PRACTICAL INSTRUCTION.

The drills have been about the same as on previous years, viz.:

Infantry.—Company drills (including the school of the soldier) once a week for each company, from November 1st to December 1st, and battalion drills once a week during the same period. From March 1st to end of the session, the same drills together with ceremonies, were had.

Artillery Drills.—The Junior class drilled with the two field-pieces from March 1st to the end of the session, in 1888. The Sophomore class had the same drills in 1889.

Lieut. Davis reports the progress good in all the drills.

Since the completion of the present organization, the latter part of September, the companies have been drilling as heretofore in the School of the Soldier and Company. Considering the number of new students, I should say that they are doing very well, and I am pleased with the interest manifested.

Target Practice.—In 1887-'8 there was none, for lack of a suitable range; in 1888-'9 there was only a little near the end of the session, on account of the non-arrival of the targets.

ARMS.

The arms consist of

150	Cadet rifles and accoutrements	(U. S.)
100	" " " "	(State.)
40	Rifles	(State.)
2	3-in rifle field-pieces	(U. S.)

The Cadet rifles are of the calibre .50, which is now obselete, and are quite old. There are not enough serviceable ones to arm the whole battalion, so that one company (E), has only a sufficient number for its new members. The other companies are fully armed.

DISCIPLINE.

My predecessor pronounces the discipline good, and my experience confirms his statement in that respect. Among so many there will necessarily be some who will break the regulations, and, consequently, be found serving punishments at frequent intervals. But up to the present date, during this session, only the milder grades of punishment have had to be inflicted. The student officers, I am pleased to say, second my efforts to preserve discipline.

THE DORMITORIES.

The dormitories were put in good repair during the summer, and since the arrival of the students weekly inspections have been made, and the necessary repairs reported. The number of students living therein (236) necessitates that three should occupy many of the rooms, which is unfortunate, both for health and studying. I would recommend that the woodwork inside be painted throughout next summer. If student labor could be utilized therefor, it could be done for a small amount, and the appearance would be greatly enhanced. I would also recommend that cast hooks be put in each room for hanging clothing. It could be done for a small cost, and save the too frequent inroads of nails, besides giving a pleasing uniformity in that respect.

I concur in the following recommendation of my predecessor:

"*Furniture*—This is an item that calls for, and I earnestly recommend it to your careful consideration. Much of the furniture is used by the original purchasers for but one session, and at its close is sold at a sacrifice. Possibly returning he buys new. Many come who can remain but a short time, and their furniture will cost as much as that for one who remains longer. When purchased in this way there is a lack of uniformity, and thus a loss of living space in the room. To avoid this I recommend that the State furnish the articles named below, and that a rent be charged and collected with the board bill. The rent should be just enough to keep up repairs and reimburse the State in a reasonable time.

LIST.

1 single iron bedstead, army style, for each student.
1 plain deal table for each room.
1 plain deal washstand for each room.
1 set plain deal shelves for clothes, for each room.

In conclusion, I desire to thank you for the assistance and co-operation you have always given me in the management of my department.

Very respectfully, your obedient servant,
JOHN V. WHITE,
1st Lt., 1st Art'y; Prof. Mil. S. and T.; Com'dt Students.

AGRICULTURAL AND MECHANICAL COLLEGE,
November 7, 1889.

General S. D. Lee, President:

SIR—I have had the hose men drill at attaching the hose to the fire hydrants in the Dormitories. While it can be accomplished in a short time, I would recommend that as soon as practicable, sufficient hose 1½ inch be gotten to attach permanently 100 feet to each hydrant. Time and the usual confusion attending such work in case of fire at night, would be saved, for the first man on the scene could turn on the water and even manage the hose if necessary. — feet more would be sufficient. A length or two could be taken from the hall farthest from the fire and used in lengthening that nearest to it, thus giving two streams.

I would also recommend that another tank be put in the Dormitories, those there now not furnishing a sufficient supply during a dry spell.

Unless some light fire ladders can be obtained, I would recommend that others be placed permanently at the other buildings on the campus, where they are liable to be needed.

Very Respectfully,
Your Obedient Servant,
JOHN V. WHITE, U. S. A.
Commandant of Students.

DRAWING DEPARTMENT.

AGRICULTURAL AND MECHANICAL COLLEGE,
November 15, 1889.

General S. D. Lee, President:

DEAR SIR—I have the honor to present the following as my second biennial report of the work done in my department:

Equipment.—The equipment has been materially increased by the addition of a number of necessary adjuncts. Among these are a set of blackboard instruments; forty drawing-boards; a like number of substantial stools; a large press for storing purposes, and also, one specially arranged with 120 suitable divisions for keeping paper and finished work. The forty tables have also been remodelled and three neatly made drawers inserted in each, one of which, together with a paper division is assigned to every student, in which to keep instruments, pencils, etc. Unfortunately the appropriation would not allow the purchase of locks, which for security were as essential as the drawers. To overcome this difficulty the students have purchased a sufficient number of "Yale" locks, at about $6 per dozen net, including expressage, etc. This is of course but a temporary expedient, as the locks being personal property may be removed at the pleasure of the owners. I would, therefore, request that in addition to such other appropriation that may be allowed this department, a sum of, say $60 be set aside, (before the close of the present session if possible), for the purchase of these or other locks. Now that the drawing department is beginning to accumulate some property of its own, I would suggest—in order to prevent its being lost or mislaid before it is needed again—that the room now used be reserved for the permanent occupation of the department, and the property left therein. This would make the section-room quite convenient for holding written examinations, as well as for the instruction of book-keeping.

Instruction.—During the past two sessions instruction has been given to the Freshman, Sophomore and Junior Classes as fully outlined in my first report, while this session Drawing has been transferred from the Junior to the Senior Class, which will prevent my judging until next session the result of the full course on any individual student. Although the progress and interest in the subject has not been all that was desirable, still, considering the various drawbacks, it has been on the whole quite satisfactory, and gives me much encouragement as to its future success in the college when further extended. Pursuant to my original intention, during the first session I accompanied the Sophomore Class on the completion of their theoretical course to Bluff Springs Creamery in this vicinity and had them sketch and measure it. These sketches and data were afterwards worked up in the section room into a very creditable set of "scale" drawings, from which, had it been desirable, a like building could have been built. This was in my opinion the most practical application of the theory of drawing for an institution like this. Last session I laid out a somewhat similar course of work and started the Sophomores on a full set of drawings for an octagon barn, a style of structure much advocated by Stewart in his "Feeding Animals," both for its economy of cost and space. The time, however, was insufficient to finish the plans, but I carried them far enough to enable such as desired to complete the work without further aid from me. A slight change has been made this session in the course of the Freshman Class, free-hand drawing having been substituted for instrumental, except so much of the latter as may be needed in working out the regular Saturday exercises in geometrical problems. This change was made principally for economy, so as to lessen and equalize the expenses in the Freshman year. For the same reason I have changed the text-book used, "Burrison's Geometric Drawing" taking the place of both "Linear Drawing" and "Projection," by Davidson, heretofore used in the Freshman and Sophomore Classes respectively.

Recommendations.—Before closing this report I have a few recommendations to make, which I will state as briefly as possible, without giving all the reasons that make them desirable: In the first place, as to the status of Drawing in the College. If any real benefit is expected to follow its study, the time now devoted to it must be extended. As at present arranged the course is altogether too short to be of much practical use, especially when the difficulties under which it labors are taken into account. The study should have a recognized position in the curriculum, similar to the other departments, and should be taught during the whole session. If this be impracticable just at this time, it should have *at least* two terms devoted to it each year, so as to make it servicable to the student. For a variety of reasons, which are unnecessary to state, it would be preferable to transfer Drawing from the Freshman to the upper classes. My experience here leads me to believe that if this were done better results would be obtainable.

Conclusion.—Although there have been considerable improvements made in the department, much yet remains to be done in order to put it in a first-class condition. I would therefore respectfully urge that as large an appropriation possible, (in excess of the $60.00 already asked,) be granted for bettering the existing facilities, and adding such others as may be desirable. I would also draw your careful attention to the various recommendations throughout this report and request favorable action thereon, as it is now almost universally admitted that the subject of Drawing is one of the most important taught in this practical age, underlying as it does so many professions, most sciences and arts, and forming the foundation and basis of nearly every mechanical calling, and should be taught, if at all, in a thorough and complete manner, particularly in an institution of this kind, in which it is at present the only practical *mechanical* study. Trusting you will act, therefore, in accordance with the suggestions herein contained, this report is

Respectfully submitted.

ERNEST L. DIMITRY,
Instructor in Charge.

PREPARATORY DEPARTMENT.

AGRICULTURAL COLLEGE, MISS.,
November 15, 1889.

Gen. S. D. Lee, President:

DEAR SIR—In submitting this report of the work of the Preparatory Department for the sessions of 1887-'88 and 1888-'89, I would present first for the information of any who may be interested the following:

GENERAL STATEMENT.

This department is designed to furnish a thorough elementary education to young men, particularly sons of farmers, who are deprived of the advantages of a good high school near home. Also, to prepare for the Freshman Class such as desire to take the College course.

The number of students admitted into the department is determined each year by the number that can be accommodated in the dormitory in excess of those in the regular College classes.

The course of study requires only one year for its completion. Those who fail to complete it in that time will not be promoted to the Freshman class, but may, if they choose, review the course the next session.

The subjects taught are the following: English Grammar and Composition, Penmanship, Declamation, Arithmetic, Book-keeping, Algebra to Equations of the First Degree, Geography, United States History, and Agriculture.

Instruction in all these branches is thorough, and as practical as the nature of the subjects will admit. Special attention is paid to composition writing by the students, in order that thereby they may acquire a correct and ready use of the Englsh language.

The agricultural and industrial features of Geography are prominently set forth: that is, the students are taught, not only where a State or country is, its size, population, capital and chief cities, but also, what is of equal, if not greater importance, its natural features, soil, climate, productions, the industries of its people and their progress in civilization. The natural advantages, resources, and industries of Mississippi are made the objects of special study. The great events, distinguished names, stirring questions, and remarkable inventions recorded in United States History are carefully investigated. The various functions of the general and the State government are analyzed and compared. The result of such study, it is believed, can hardly be other than the development of an intelligent, patriotic spirit and proper preparation for the active and responsible duties of citizenship.

Particular stress is laid upon the business portion of Arithmetic: Percentage, Partnership, etc., preparatory to the study of Book-keeping during the last term. Book-keeping is taught through single entry only, the study being completed in the Freshman year.

During the first half of the fall term instruction in Agriculture is given by means of an elementary text-book, supplemented by occasional lectures on the subject by the Professors of Agriculture and Chemistry. Throughout the greater part of the second term, two lectures a week on practical agriculture and the selection, care and common diseases of stock are delivered before the classes by some professor or instructor specially qualified for that duty.

The provision of this College of such a course for young men so advanced in age as to be unwilling to attend the district school and be classed with children not yet in their teens, could not be other than a great blessing to these backward and discouraged youth. Here they can and do assemble, and together, without the mortification incurred at the home school, remedy to a great extent the disadvantages under which otherwise they would have entered upon life's duties. The State could hardly make a better investment of a portion of her revenue than she is making for the education in this department of a large number of her worthy but unfortunate sons.

ATTENDANCE AND SCHOLARSHIP.

Quite a number of the students in this department are young men, usually from the country, who have not attended school for several years. Naturally they find it very difficult at first to apply themselves to close and constant mental effort. Some become so discouraged that they give up the attempt in a month or two. Others hold on until the spring and would remain to the end of the session, but are called home to assist in the planting or working of the new crop. Still later in the session, some are forced to leave, in order that they may secure situations which will enable them to return the next fall. These facts are set forth as an explanation of the disparity between the total enrollment in the department and the number examined in the various studies of the course.

The inequality of the number examined in different studies is likewise explained by the fact that the examinations are held at intervals during the session, and the attendance is much larger at times than at others. The following tabulated summaries of the attendance and the result of the examinations during the past two years will perhaps make these points clear and comprehensive:

ATTENDANCE.

1887-'88.

Total enrollment	108
Highest monthly enrollment, (October)	95
Lowest monthly enrollment, (June)	55
Average monthly enrollment	83

1888-'89.

Total enrollment	136
Highest monthly enrollment, (October and January)	104
Lowest monthly enrollment, (June)	65
Average monthly enrollment	95

RESULT OF EXAMINATIONS.

Studies.	No. Ex'd	Pass'd
Agriculture	87	78
Arithmetic	78	65
Geography	84	70
English Grammar	76	65
U. S. History	55	48

Studies.	No. Ex'd	Pass'd
Agriculture	79	78
Arithmetic	79	57
Geography	89	84
English Grammar	72	64
U. S. History	59	46

Final examinations in Algebra and Book-keeping are not held until these subjects are completed in the Freshman year.

ASSISTANTS.

The greatest difficulty which I have had to contend with has been the frequent change of instructors in this department in the past two or three years. It seems almost impossible to retain an instructor regularly in the Preparatory department even one entire session. By the resignation of a professor or an assistant professor I am constantly losing my most experienced helpers, who are promoted to fill these vacancies. This I know cannot, and ought not, to be prevented, except by removing the cause of resignation in higher places. But there is one cause, Mr. President, which will continue to bring about these frequent changes, even though none were occasioned by promotion to higher positions in the College. Already we have lost several valuable assistants on this account; and it is not likely that college graduates will remain long as tutors in this department at $40 per month, the salary now paid to two or three of them, when they can get better wages in the public schools, or at nearly any other employment. These frequent changes are a decided drawback to us; certainly not conducive to the best interests of this or any other undertaking. Hence, I would respectfully urge that in the estimate which you make for the College expenses for the next two years, you recommend that the salaries of the instructors in the preparatory department be raised to at least $50 or $60 a month. This certainly should be done after the instructor has gained one or two years' experience in teaching; and the first assistant in the department should, I think, be given not less than $70 or $75 a month, as the entire management of the department at times devolves on him. By paying salaries sufficient to retain for several years our skilled and trained instructors, the standard of our work would be raised to a degree of perfection which it is manifestly impossible to attain under the present system.

My assistants have been faithful and earnest in the performance of their duties, richly meriting the warm commendation which I would cordially bestow. To them, of course, is due in great measure the success which has attended our labors, and such credit is cheerfully accorded them.

SUMMARY.

Disorder and indifference on the part of some students have from time to time caused perplexity and anxiety; difficulties of various kinds have been contended with, and everything has not been altogether as we wished; but this was to be expected, and hence in the retrospect of the past two years which we now make, affords far greater satisfaction than regret. Over two hundred Mississippi boys have been instructed in the elements of a good English education, and to many it will be the last opportunity of the kind they will ever enjoy. Between sixty and seventy have each year been recommended for promotion to the Freshman class. For these, and other reasons, we feel justified in looking with pleasure on the past, and turning hopefully to the future.

The session of 1889–'90 bids fair to be a prosperous one. A full and capable corps of instructors are now regularly engaged in this department, and over one hundred students are now upon our rolls. If but given a due financial support, we promise that our work in future shall certainly equal, if not surpass, in excellence that of former years.

To you, Mr. President, I would, in conclusion, return thanks for the advice and encouragement which you have frequently given me, and for the unqualified interest which you have always manifested in the work of this department.

Respectfully submitted.

DABNEY LIPSCOMB,
Professor in Charge Preparatory Dep't.

REPORT OF THE SURGEON.

AGRICULTURAL AND MECHANICAL COLLEGE.
November 2, 1889.

General S. D. Lee, President.

DEAR SIR:—I respectfully offer the following report as Surgeon of the Agricultural and Mechanical College. The sanitary surroundings of the campus have been in an excellent condition, all the offal and other unnecessary filth attendant upon so a large a body of students and officers, have been hauled off, and not allowed to permeate the soil and thereby contaminate the drinking water. The cisterns are all in good condition, and the water of each is analyzed once or twice yearly, making it impossible for impure water to exist in any one of them without our knowledge.

The diet has been wholesome and well prepared. Our facilities for taking care of the sick are better than any other place in the State; we have a hospital with eight rooms, four large and four small ones, a gasoline stove for the purpose of heating water, warming food, and making other necessaries for the sick; a good cemented cistern that will hold about five hundred barrels of water. We have a professional nurse, who sleeps in the hospital, gives all the medicine and watches the sick at all hours. The health of the students since my last report—November,. 1887, has been better than for any two years since my stay at the College. We have had but one death in the last five years. The bulk of our sickness is with the boys from off the Mississippi bottoms, who suffer mostly with chills for a month or two after they get here. We rarely ever have an accident. This is my sixth year as surgeon for the college, and I have had only three broken limbs to set. I feel that we might challenge the world to show a better record than the Agricultural and Mechanical College in regard to the health and the few deaths among the students. It is my duty to have regular hours at my office, to prescribe for the sick and grant excuses to all of those who are unable to perform the duties of that day. I am also the sanitary officer, and as such, I am to decide when the peculiar state of the matter requires, in the interest of health, the cessation of any duty to be performed by, or required of the students; to look into the diet at the mess table; also to do whatever else is required of me, as health officer, by the president. For said service I am paid a fee of five dollars, by the college, for every student that matriculates. This fee is collected of the students.

W. H. BARR, Surgeon.

REPORT OF STEWARD.

AGRICULTURAL AND MECHANICAL COLLEGE,
November 26, 1889.

Gen. S. D. Lee, President:

DEAR SIR—I have the honor to submit the following report of the Steward's Department since my connection with the College as Steward. I took charge upon the resignation of Mr. Howard, on February 20, 1889:

I found a large and comfortable dining hall with storeroom, kitchen and bakery attached, large range, bake-oven, and sufficient furniture and crockery-ware for feeding 200 students. Everything seemed to be in good working order. I felt my way carefully for the first month, and as I became more familiar with the workings of the department, I from time to time made such changes as in my judgment would redound to the interest of the institution as well as to each individual student by giving them as I thought more healthful food, and at the same time keep the price of board at about the same average. These changes seemed to meet with the approval of the student body as well as the College surgeon. I always endeavored to give them fresh wholesome meats, such as beef, (stall-fed from the farm department) pork, fish and ham, and made it a point to use all the vegetables I could get, such as garden and field peas, cabbage, turnips and greens, Irish potatoes, sweet potatoes, and in season radishes, beets, lettuce, etc. I usually give students butter at least once a day, always being careful to have it fresh and pure. When you take into consideration the fact that from the Steward's Department is paid all the hire of servants, extras for the sick at hospital, oil for lights, and breakage, which will average about $20 a month; the average for board, $8.25 per month, is extremely low. I will state, however, that when anything is broken if it can be ascertained who broke it, the damage is charged to that party, whether he be student, officer or servant. One-half the salary of the first month is retained of each servant to insure the payment of such damages as may be charged to him in case he quits at the end of a month.

All supplies for the Steward's Department are purchased at the lowest possible wholesale price for cash. At the end of each month a careful inventory is taken of all supplies on hand, then supplies on hand is deducted from amount of supplies bought for that month, by which we find the exact amount of supplies consumed during that month, which amount is then reduced to the actual cost for each day which averages a fraction over 26 cents per day, then each student is charged with only the number of rations he has taken during that month. As it cost just as much to prepare the food for 150 students as for 250, the more students the better the fare for the same money.

I attach to this an inventory of property belonging to the Steward's department, and as we had the misfortune to lose by fire on November 16, our spacious dining hall, store-room, kitchen and bakery, with the large range and fixtures, bake oven, and many other articles of furniture and fixtures, the amount of the inventory is not as large as the last one. However, as we had a little insurance on the building we hope soon to have it replaced with a single story building of same dimensions. We will also have a new range and fixtures and bake oven.

Respectfully submitted,

W. J. GALLOWAY, Steward.

REPORT OF THE STATE CHEMIST.

AGRICULTURAL AND MECHANICAL COLLEGE,
November 15, 1889.

General S. D. Lee, President:

SIR—We submit herewith the report as State Chemist for publication in the next biennnial report of the College.

Very respectfully,

W. L HUTCHINSON.

The bulk of the work done as State Chemist consists in the analysis of fertilizers, marls, soils, minerals, potuba and mineral waters.

All such work done by Prof. Myers during the session of 1887–'88, has been published in the First Annual Report of the Experiment Station and need not be included here. About half of the work done by us during the session 1888–'89 is included in the same report. This refers essentially to the fertilizer work that has been done, and this is the principal work that is of any general interest.

The Station has published most of the analysis of marls that have been made, with a discussion ot the value of the marls of the State, as Bulletin No. 4. Except to those for whom they were made the analysis of waters, soils and minerals have very little value, and we therefore do not include them in this report, but, when the matter has accummulated sufficiently to authorize it, we will publish them as a separate bulletin. The original work done in this laboratory has appeared in previous bulletins, or will appear in bulletins to be published by the Experiment Station. We therefore deem it necessary to include only the fertilizer analysis made during the session of 1888–'89 in this report.

The State Chemist formerly charged the farmers of this State three dollars for a qualitative and ten dollars for a quantitative analysis. We have deemed it best to make all such analysis free of charge, and in no case has any citizen of the State been charged for such work.

The fertilizer law of this State, and the valuation of fertilizers appear on pages 15-23 of the First Annual Report of the Experiment Station. The table the next page shows the analyses made during the season of 1888-'89.

We would call your attention to the fact that the existing fertilizer law can possibly be very much improved. We doubt if the farmers are much protected by the law as it exists at present. It does not provide any funds for the publication of bulletins giving the farmers information concerning the fertilizers offered for sale at a time when they could use such information to guide them in their purchases. Of what benefit to the farmer are published fertilizer analyses when these analyses were made two years previous? Yet this must be the case so long as we have no medium for publication save through the biennial reports of the college. There is but one means of detecting inferior goods sold in the State, and that is for farmers to draw samples from goods bought and send them to the State Chemist for analysis. From the small number of such analyses which we have made we are quite sure that this means is wholly inadequate to the detection of fraud should any be practiced in the fertilizer trade of this State.

We would suggest that a far better plan would be to have every manufacturer or dealer to print the guaranteed analysis on the bag, barrel or other parcel containing the fertilizer, and in addition to this require each bag or other article to have on it a tag with the printed guarantee of the State Chemist or Commissioner of Agriculture. Provision should then be made whereby an agent could be sent throughout the different parts of the State and collect samples for official analysis. By charging a small tax, say fifty cents, for enough tags to tag a ton of fertilizer, would provide a fund sufficiently large to cover expenses. We are of opinion that a plan something similar to the one we have outlined would come very much nearer to accomplishing the objects for which a fertilizer law is made than the one used at present.

Respectfully submitted,

W. L. HUTCHINSON,
Ex-officio State Chemist.

FETILIZER ANALYSES MADE DURING THE SEASON OF 1888–'9.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND OF FERTILIZER.	Station Number.	Moisture.	Phosphoric Acid soluble in water.	Phos. Acid soluble in neutral amm. citrate	Phos. Acid insoluble in neutral amm. citrate	Total Phosphoric Acid	Available Phosphoric Acid.	Nitrogen.	Equivalent to Ammonia.	Potash.	Relative value per ton
Pacific Gua. Co., Boston..	Sol. Pacific..........	161	19.28	4.90	2.42	3.55	10.87	7.32	2.12	2.57	1.70	....
W. J. Hudson, Mobile, Ala.	Mobile St'd & Club Gua	166	....	5.61	3.15	4.56	13.32	8.76	2.11	2.56	1.08	....
G. W. Scott & Co., Atlanta.	Gossypium Phos.....	177	19.29	6.84	1.50	2.79	11.13	8.34	2.40	2.91	1.78	....
G. W. Scott & Co., Atlanta	Scott's H. Grade A. P.	178	18.85	9.59	2.51	3.93	16.03	12.10	....	....	....	....
Davis, Marsh'l & co., Mobile	Magnet Sol. Guano...	179	15.35	3.07	2.28	4.86	10.21	5.35	2.75	3.54	2.19	....
Davis, Marsh'l & co., Mobile	Magnet Acid Phos....	180	17.25	3.93	5.02	9.42	18.37	8.95	....	....	....	....
Maryman & Co., Baltimore	Amm'd Dis'd Bone ..	183	12.85	7.82	2.01	2 71	12.54	9.83	1.12	2.57	2.41	....
Adair Bros. & Co., Atlanta	Furman's Acid Phos..	184	10.53	10.60	1.65	3.05	15.30	12.25	....	....	....	....
Adair Bros. & Co., Atlanta	Buffalo Bone Guano..	185	11.97	6.64	1 85	2.31	10.80	8 49	2 07	2.51	2.13	....
Adair Bros. & Co., Atlanta	Farish Furman's Fo'la	186	14.25	7.75	3.93	2.27	13.95	11.68	....	....	....	....
Std. G. & C. M'fg Co., N.O.	Stern's Am. Raw Bone	188	14.20	7.35	2.43	.98	10.77	9.78	1.90	2.31	2.32	....
Planters Fert'r Co., N. O.	Cotton Fertilizer.....	203	14.22	7.28	.81	.22	8.31	8.09	2.50	3.04	2.38	....
Meridian F. Co., Meridian	Acid Phosphate......	314	....	....	....	....	20.72	....	....	....	....	....
Std. G. & F. M'fg Co., N. O.	Chp'n Farmers' Choice	318	12.25	6.74	1.32	.57	8.63	8.06	1.53	1.86	2.16	....

EXPERIMENT STATION.

AGRICULTURAL COLLEGE, MISSISSIPPI, Nov. 15, 1889.

Gen. S. D. Lee, President:

DEAR SIR—I have the honor to present the following report in regard to the Agricultural Experiment Station:

By Act of Congress, approved March 2d, 1887, provision was made for an Agricultural Experiment Station in each State and Territory. On January 26, 1888, the State Legisture of Mississippi accepted the provisions of this Act, and located the Station for this State at the Agricultural College. The objects of the Station, as defined in Section 2 of the Act establishing it, are:

"SEC. 2. That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative croppings as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

Although a department of the College, the work of the Station is entirely distinct, the Station having its separate working force, its own teams, buildings, tools, etc., and accounts of its expenditures being sent to the Secretary of the Treasury, at Washington, for final approval. The work of the Station furnishes continual object lessons to the students, and in this way is an advantage to the College. The Farm Department is especially benefited by the Station work, as it is thus relieved of the large amount of experiment work which was formerly required, and which involved great expenditure of time and money; while the Station finds its work furthered in many ways by its location at the College.

The Act establishing the Station requires (Section 4) the publication of an annual report, and bulletins as often as once each quarter. Up to this time the Station has published one annual report and ten bulletins, which are sent free of charge to all farmers in this State who apply for them, and to which reference is made for further details of the Station work. These publications have been as follows:

Number.	Date.	Subject.
1	March 21, 1888.	Organization.
2	May 20, 1888.	Cotton Worm.
3	June 20, 1888.	Analyses of Commercial Fertilizers.
4	Nov. 7, 1888.	Marls of Mississippi.
5	May 20, 1889.	Fertilizers.
6	June 25, 1889.	Charbons.
7	June 20, 1889.	Hay Presses.
8	Aug. 30, 1889.	Stock Feeding.
9	Aug. 30, 1889.	Diseases of Sheep and Calves. Bitterweed.
10.	Oct. 10, 1889.	Dishorning.

February 1, 1889, First Annual Report.

Respectfully submitted,

S. M. TRACY, Director.

Laws of Congress Relating to the College.

AN ACT donating public lands to the several States and Territories which may provide Colleges for the benefit of agriculture and the mechanic arts.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there be granted to the several States, for the purpose hereinafter mentioned, an amount of public land, to be apportioned to each State a quantity equal to thirty thousand acres for each Senator and Representative in Congress to which the States are respectively entitled by the appointment under the census of eighteen hundred and sixty. *Provided,* That no mineral lands shall be selected or purchased under the provisions of this Act.

SEC. 2. *And be it further enacted,* That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections, or subdivisions of sections not less than one quarter of a section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled shall be selected from such lands within the limits of such State; and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public land subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this Act, land scrip to the amount of acres for the deficiency of its distributive share; said scrip to be sold by said State, and the proceeds thereof applied to the uses and purposes prescribed in this Act, and for no other use or purpose whatever; *Provided,* That in no case shall any State to which land scrip may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry, at one dollar and twenty-five cents or less per acre; *and provided further,* that not more than one million acres shall be located by such assignees in any one of the States; *and provided further,* that no such location shall be made before one year from the passage of this Act.

SEC. 3. *And be it further enacted,* That all the expeases of management, superintendence and taxes, from date of selection of said lands previous to their sales, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States, to which they may belong, out of the Treasury of said States, so that the entire proceeds of the sale of said lands shall be applied without any diminution whatever to the purposes hereinafter mentioned.

SEC. 4. *And be it further enacted,* That all moneys derived from the sale of the lands aforesaid by the States to which the lands are apportioned, and from the sale of lands scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or of some other safe stocks, yielding not less than five per centum upon the par value of said stocks; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in fifth section of this Act), and the interest of which shall be inviolably appropriated by each State which may take and claim the benefit of this Act, to the endowment, support and maintenance of at least one College, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches ot learning as are related to agriculture and the mechanic arts, and in such manner as the Legislatures of the States may prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

SEC. 5. *And be it further enacted,* That the grant of land and land scrip hereby authorized shall be made on the following conditions, to which as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts.

1. If any portion of the fund invested as provided by the foregoing section, or any portion of the interest thereon, shall by any act or contingency be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished; and the annual interest shall be regularly applied without diminution to the purposes mentioned in the fourth section of this Act, except that a sum not exceeding ten per centum upon the amount received by any State under the provisions of this Act may be expended for the purchase of lands for sites of experimental farms whenever authorized by the respective Legislatures of said States.

2. No portion of said fund, nor interest thereon, shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings.

3. Any State which may take and claim the benefit of the provisions of this Act, shall provide within five years at least not less than one College, as described in the fourth section of this Act, or the grant to said State shall cease; and said State shall be bound to pay the United States the amount received of any lands previously sold, and the title to purchasers under the State shall be valid.

4. An annual report shall be made regarding the progress of each College, recording any improvements and experiments made, with their costs and results, and such other matters, including State and industrial statistics, as may be supposed useful; one copy of which shall be transmitted by mail free by each to all the other Colleges which may be endowed under the provisions of this Act, and also one copy to the Secretary of the Interior.

5. When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the States at the maximum price, and the number of acres proportionately diminished.

6. No State, while in a condition of rebellion or insurrection against the Government of the United States, shall be entitled to the benefit of this Act.

7. No State shall be entitled to the benefit of this Act unless it shall express the acceptance thereof by the Legislature within two years from the date of its approval by the President.

SEC. 6. *And be it further enacted,* That land scrip issued under the provisions of this Act shall not be subject to location until after the first day of January, one thousand eight hundred and sixty-three.

SEC. 7. *And be it further enacted,* That the land officers shall receive the same fees for locating land scrip issued under the provisions of this Act as are now allowed for the location of military bounty land warrants under existing laws; *provided,* that maximum compensation shall not be thereby increased.

SEC. 8. *And be it further enacted,* That the Governors of the several States to which scrip shall be issued under this Act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

Approved, July 2, 1865.

LAWS OF THE STATE RELATING TO THE COLLEGE.

AN ACT to establish and organize Agricultural and Mechanical Colleges, and to regulate the government of same.

WHEREAS, Section 8, of Article VIII, of the Constitution provides that the Legislature shall, as soon as practicable, provide for the establishment of an Agricultural College or Colleges, and shall appropriate the two hundred and ten thousand acres of land donated to the State for the support of such a College by the Act of Congress, passed July 2, A. D., 1865, or the money or script as the case may be, arising from the sale of said lands, or any lands which may hereafter be granted or appropriated for such purposes; and

WHEREAS, The State having accepted said lands and pledged its faith to appropriate the same to the endowment of said institutions of learning; therefore,

SECTION. 1. Be it enacted by the Legislature of the State of Mississippi, That the institution known as the Alcorn University is hereby establised as, and declared to be, an Agricultural College, for the education of the colored youth of the State, and to be hereafter known as the Alcorn Agricultural and Mechanical College of the State of Mississippi.

SEC. 2. *Be it further enacted*, That an Agricultural College is hereby established for the education of the white youth of the State of Mississippi, and shall be known as the Agricultural and Mechanical College of the State of Mississippi, and shall be located and organized as hereinafter provided.

SEC. 3. *Be it further enacted*, That the Governor of the State shall nominate and appoint, by and with the advice and consent of the senate, nine persons for each of said Colleges, to be Trustees, to serve six years, one for each of said Colleges, to be chosen from each Congressional District, and the remainder from the State at large; five of each Board of Trustees shall be chosen from practical agriculturists or mechanics, or selected from both, as may be deemed advisable. Immediately after they shall be assembled, in consequence of their first appointment, they shall be divided equally into three classes. The term of the first class shall expire two years from the date of their appointment, and the second class four years from the date of their appointment, and the third class at the expiration of six years, so that one-third may be chosen every second year; and if vacancies happen by resignation or otherwise, the Governor may make temporary appointments until the next meeting of the Legislature. The Governor shall be *ex-officio* a member of each of said Boards of Trustees, and shall act as President thereof in all of their meetings when present, but in his absence they may choose a President *pro tem.* Five of the Trustees of each Board shall be a quorum for the transaction of business.

SEC. 4. *Be it further enacted,* That the Secretary of State shall furnish a certificate to each Trustee within ten days after his appointment, notifying him that he has been so appointed; and if any Trustee fail for the space of thirty days to inform the Governor of his acceptance, then his appointment shall be void, and his place filled as heretofore provided in cases of vacancies.

SEC. 5. *Be it further enacted,* That each of the Boards of Trustees herein provided for, and their successors in office, be and the same are hereby declared to be a body politic and corporate by their respective names and styles, and shall have a common seal, and each in his own name shall sue and be sued, contract and be contracted with, and may own, purchase, sell and convey property, both real, personal and mixed.

SEC. 6. *Be it further enacted,* That the Governor shall, as *ex-officio* President, convene the Board of Trustees of either of said Colleges, to consider any business connected with the same, whenever he shall deem it expedient to do so.

SEC. 7. *Be it further enacted,* That the Trustees of each College shall elect a Secretary of the Board, whose duty it shall be to record in a well-bound book all the proceedings had by said Board, and shall be allowed such compensation for his services as the Board may deem proper.

SEC. 8. *Be it further enacted,* That the State Treasurer shall be *ex-officio* Treasurer of both Boards of Trustees, whose duty it shall be to secure and safely keep all moneys belongto the Agricultural and Mechanical Colleges, and to disburse the same under the orders of the Board of Trustees.

SEC. 9. *Be it further enacted,* That each of said Boards of Trustees shall possess all the power that is necessary and proper for the accomplishment of the trust reposed in them, viz: the establishment and maintenance of a first-class institution, at which the youth of the State of Mississippi may acquire a common school education, and a scientific and practical knowledge of agriculture, horticulture and the mechanical arts; also of the proper growth and care of stock, without, however, excluding military tactics. They may also adopt all such by-laws and regulations as they may deem necessary for that purpose, not repugnant to the Constitution and laws of this State or of the United States.

SEC. 10. *Be it further enacted,* That the Board of Trustees shall appoint the President and Professors of the College, and such other officers as they may think proper to put the College into successful operation, and shall make such laws, rules and regulations for the government of said officers as they may deem advisable. They shall regulate the course of study, rates of tuition, management of the experimental farm, the manner of performing labor and the kind of labor to be performed by the students, together with the course of discipline necessary to enforce the faithful discharge of the duties of all officers, professors and students.

SEC. 11. *Be it further enacted,* That the Trustees to be appointed as hereinbefore provided, shall receive as compensation for their services their actual expenses incurred in attending any of the meetings of the Board of Trustees, payable out of any funds belonging to the College.

SEC. 12. *Be it further enacted,* That the said Board of Trustees shall organize under the provisions of this Act as soon as practicable after their appointment, and the Trustees of the Agricultural and Mechanical College of the State of Mississippi shall, immediately after their organization, proceed to procure, by purchase or donation, a site for the location of the said Agricultural and Mechanical College, with an experimental farm thereto attached of not less than one hundred and sixty acres of land. In the selection of the said site and experimental farm, the Trustees shall look to the convenience of the people of every section of the State, the proximity of the proposed site to other public institutions supported in whole or in part by the State, with a view to giving the preference to localities least favored heretofore, and also the facilities for going to and from said College, the advantages and disadvantages of the different sites proposed, and shall locate the same at the place where most advantages are offered; *Provided,* The location shall be at a place known to be healthy; *and Provided,* That said Trustees shall give notice for sixty days in three newspapers published in this State, that they will receive proposals and examine sites before locating said College.

SEC. 13. *Be it further enacted,* That the interest arising from the proceeds of the fund known as the Agricultural Land Script Fund is hereby set apart for the use and benefit of said Agricultural and Mechanical College, to be used in equal proportions for the benefit of the youth of both races and Colleges, and shall be drawn from the Treasury by the Board of Trustees on vouchers audited by the Board and approved by the Governor, and filed in the Auditor's office, and upon the filing of such vouchers the Auditor of Public Accounts shall draw his warrant on the State Treasurer for the same from time to time, as funds may be needed to pay the officers and professors of said Colleges, or for any other necessary and proper object connected with the said Agricultural and Mechanical College not inconsistent with the Act of Congress, approved July 2, 1862.

SEC. 14. *Be it further enacted,* That in order to establish financial equity in all respects between the Colleges herein provided for, a sum equal to the amount heretofore appropriated to the Alcorn University out of the principal arising from the sale of said land scrip, is hereby appropriated to the College provided for in section two of this Act, and the Trustees thereof shall be authorized to use the same in carrying out the provisions of this Act for the benefit of said College not inconsistent with the Act or Acts of Congress donating the same.

SEC. 15. *Be it further enacted,* That this Act take effect and be in force from and after its passage.

Approved, Feb. 28, 1878.

ERRATA.

This Report was so hurriedly printed, in order to place it before the Legislature, the proof-sheets could not be examined at the College, and hence the errors that appear. Only a few are material, but all are here noted.

PAGE.

16-17—"exempt" should read equipped.

22—fourteenth line from bottom: for "$100" read $1000.

29—After " History," 15th line, add , in 16th line, after "such," insert a.

33—In 19th line, for "thesis," read theses; in last line read departments for " department "

34—In 15th line, or "sixty" read sixty-five.

43—The "labor statement," lower half of page, should be omitted.

46—At end of 9th line for , insert . At commencement 10th line, for "while" read While. At end 21st line, after "Electricity," omit "and." 10th line from bottom, for "1887–'8," insert 1887–8 In 7th line from bottom, for "blow-pipe analysis," insert Blow-Pipe Analysis. Fourth line from bottom, for 1888–'9" insert 1888–9.

47—In 17th line, after "soils," substitute , for ; in 22d line, for "1887–'88" read 1887–8; in 24th line, for " 1888–'9" read 1888–'9; in 27th line, for "1887–'8" read 1887–8; in second line from bottom, for "deficieney" read deficiency; in last line, for "price" read piece.

48—At end of line 13, for "Merry" read Meng. In 20th line for "relation" read "relations," and for "has" read have. In 10th line from bottom, for "sacharine" read saccharine; and where "analysis" occurs, read Analyses After "Respectfully submitted by" insert ,

54—In 13th line from bottom after "making" insert students. In 7th line from bottom "Zoology Commencing" should read: Zoology. Commencing.

56—In 23d line, for "this" read his. In 26th line, omit "the" before Infantry.

58—At end of second line for "cast" read coat.

61—In 5th line from bottom, after the word "following" omit :

63—In first line, for "provision of" read provision at.

64—In first line of Table of Studies, for "78" read 86.

66—8th line from bottom, for "matter" read weather.

68—In 19th line from bottom, for "portuba" read potable. In 13th line from bottom for "1887–'8" read 1887–8, and in 16th line, for "1888–'9" read 1888–9. In 10th and 19th lies from bottom for " analysis" read analyses.

69—In 2d and 6th lines, for "analysis" read analyses. In 2d and 9th lines for "1888–'9" read 1888–9. In 10th line, after "table" insert on. At beginning 27th line, after "made" insert ,

70—In caption to Fertilizer Analyses, for "1888–'9" insert 1888–9.